Risk Assessment for Domestic Violence Offenders:

Predicting Probation Outcomes

by

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ABSTRACT

Risk assessment instruments play a significant role in correctional intervention and guide decisions about supervision and treatment. Although advances have been made in risk assessment over the past 50 years, limited attention has been given to risk assessment for domestic violence offenders. This study investigates the use of the Domestic Violence Screening Inventory (DVSI) and the Offender Screening Tool (OST) with a sample of 573 offenders convicted of domestic violence offenses and sentenced to supervised probation in Maricopa County, Arizona.

The study has two purposes. The first is to assess the predictive validity of the existing assessment tools with a sample of domestic violence offenders, using a number of probation outcomes. The second is to identify the most significant predictors of probation outcomes. Predictive validity is assessed using crosstabulations, bivariate correlations, and the Receiver Operating Characteristic (ROC) curve. Logistic regression is used to identify the most significant predictors of probation outcomes.

The DVSI and the OST were found to be predictive of probation outcomes and were most predictive of the outcomes petition to revoke filed, petition to revoke filed for a violation of specialized domestic violence conditions, and unsuccessful probation status. Significant predictors include demographics, criminal history, current offense, victim characteristics, static factors, supervision variables and dynamic variables. The most consistent predictors were supervision variables and dynamic risk factors. The supervision variables include being

supervised on a specialized domestic violence caseload and changes in supervision, either an increase or decrease, during the probation grant. The dynamic variables include employment and substance abuse.

The overall findings provide support for the continued use of the DVSI and the OST and are consistent with the literature on evidence-based practices for correctional interventions. However, the predictive validity of the assessments varied across sub-groups and the instruments were less predictive for females and offenders with non-intimate partner victims. In addition, study variables only explained a small portion of the variation in the probation outcomes. Additional research is needed, expanding beyond the psychology of criminal conduct, to continue to improve existing risk assessment tools and identify more salient predictors of probation outcomes for domestic violence offenders.

DEDICATION

This dissertation is dedicated to:

The late Dr. Dennis Palumbo

Dr. Dennis Palumbo provided significant opportunities and guidance throughout my career as a graduate student. I am sorry I did not complete this task in time for him to be a part of it.

My family: Thomas, Tyler and Jordan Ferguson

My wonderful husband and two beautiful daughters have helped inspire me to complete this goal, and not walk away from it. I could not ask for a more patient and understanding family as I complete this milestone. I look forward to the time we will be able to spend together once it is completed.

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Chapter 1

INTRODUCTION AND LITERATURE REVIEW

The adult correctional population in the United States has increased substantially over the past 20 years. The 7.3 million adults under correctional supervision in 2008 represent a 97 percent increase over the 3.7 million adults supervised in 1998. The majority of these individuals, 5.1 million persons, were under community supervision by departments of probation or parole. This means that approximately one out of every 45 adults in the community was on probation or parole in 2008 (Glaze & Bonczar, 2009). However, while 70 percent of the adult offender population is supervised in the community, this is not where 70 percent of the corrections resources are allocated. In Fiscal Year 2008, 34 states reported that they spent a total of $21.17 billion on corrections, of which, $18.65 billion (88 percent) was allocated for prison and only $2.52 billion (12 percent) was spent on probation and parole supervision (Pew Center on the States, 2009).

As the number of offenders supervised in the community through probation and parole has grown, the characteristics of these individuals has changed. The assumption that individuals supervised in the community represent those convicted of minor offenses is not true. The probation population has become more serious, including an increasing number of felony offenders and individuals convicted of violent crimes (Petersilia, 1995).

This is the context in which community corrections agencies (probation and parole) operate. These agencies often have multiple goals, which are often perceived as being in conflict with each other. These goals include public safety

through the control and monitoring of offenders, and changing offender behavior, or rehabilitation (Sluder, Sapp, & Langston, 1994). Because of the large numbers of individuals under supervision, a limited amount of resources, and the multiple goals that agencies are trying to achieve, decisions need to be made about the most effective way to provide supervision and achieve these goals.

Recently, the use of risk assessment instruments has played an important role in helping agencies make informed decisions about supervision and treatment, and resource allocation. This study provides a look at the use of risk assessment instruments for domestic violence offenders in the context of probation supervision. It assesses the ability of the assessments to predict probation outcomes as well as identifying the most significant predictors. Prior to describing the study, the existing research on risk assessment is reviewed.

Effective Correctional Intervention and Evidence-Based Practice (EBP)

Significant advances have been made in research to identify what constitutes effective correctional supervision and treatment. In 1974 the prognosis was fairly bleak following Martinson's (Martinson, 1974) article on "What works? Questions and answers about prison reform", which challenged the effectiveness of rehabilitation. The phrase that captured attention, and became a catch phrase for correctional intervention, was "nothing works." This prompted a shift away from rehabilitation to a more punitive approach to crime and correctional policies. However, efforts to identify effective intervention strategies continued and in the 1980s optimism returned based on literature

reviews and meta-analyses that suggested that some programs had some impact on recidivism (Palmer, 1991; Palmer, 1995).

In his review of meta-analyses and literature reviews of correctional programs, Palmer (1991) reported that when individual programs were grouped together (e.g. group counseling) they appeared to be unsuccessful at reducing recidivism. At the same time, many individual programs reported positive results. These studies helped to change the perspective about the effectiveness of correctional intervention. Instead of a view that "nothing works," it was recognized that some programs reduce recidivism under certain conditions and with certain offenders.

Ideas about who might be impacted by treatment also changed. Whereas previously there had been a perception that treatment could be successful with only low risk offenders or those who were amenable to treatment, views changed to reflect that, "Intervention has a widely recognized and generally accepted role with at least serious and repeat offenders" (Palmer, 1991, 339). By the mid-1990s, there was growing consensus within the literature that interventions work, although some more than others (Palmer, 1995). Research on effective correctional interventions has continued over the past two decades.

Psychology of Criminal Conduct

Along with research on the effectiveness of correctional interventions, significant changes have occurred over the past two decades in the theoretical frameworks that are prominent within the fields of criminology and criminal justice. A shift has occurred from sociological criminology focused on ecological

and structural effects on crime rates and variables such as age, sex, race and social class, to social psychological explanations of crime that focus on a better understanding of the criminal conduct of individuals (Andrews & Bonta, 1998; Andrews, Bonta, & Hoge, 1990; Andrews, Bonta, & Wormith, 2006).

A shift has also occurred from theories that aim to explain differences between individuals to those that explain within-individual differences. Theories focused on between individual differences try to explain why some individuals commit crime and others do not. These explanations tend to be static, or unchanging. In contrast, theories looking at within-individual variation are more dynamic and look at changes over time in the criminal behavior of the individual (Farrington, 2003).

The theoretical perspective seeking to explain within-individual differences, or variation in the delinquent and criminal occurrence of individual acts, is often identified as the psychology of criminal conduct. Within this perspective, the goal is to find explanations of criminal behavior that are consistent with empirical research, are rational, and are useful to people working in the field (Andrews & Bonta, 1998).

The psychology of criminal conduct reflects a number of different theoretical perspectives. One is differential association in which attitudes, values, beliefs and rationalizations that may be supportive of crime are learned through procriminal and anticriminal patterns (Sutherland & Cressey, 1966). Another is social learning theory (Akers & Jensen, 2006). These theories also identify individual factors that are correlated with criminal behavior that are dynamic, or

changeable, lending themselves as potential targets for treatment or intervention. The factors become relevant for assessing areas of need and risk for recidivism. Correctional programs based on the principles of these theories have had better success than other approaches (Andrews & Bonta, 1998). This framework has also been used to help identify principles of effective correctional intervention.

Principles of Effective Correctional Intervention

Research conducted within the framework of the psychology of criminal conduct, and on correctional treatment programs has generated three principles of effective correctional intervention. The principles address the broad issues of who should receive services, what level of service is needed, what should be targeted through those services, and what type of service should be received.

Risk principle. The first principle of effective correctional intervention is the risk principle. The risk principle identifies "who" should be the focus of supervision and treatment services. It states that the amount of supervision or treatment an individual receives should be based on the assessed risk level. Individuals assessed as high risk should receive more intensive services (Andrews et al., 1990). In addition, studies of the relationship between risk and treatment intensity (e.g. minimal or intensive) counter the perspective that any treatment is better than no treatment. Findings across multiple studies indicate that more intensive service is either unrelated to outcomes with low risk cases or has resulted in a significantly poorer outcome than when less intense service was received (Andrews et al., 1990).

Need principle. The second principle is the need principle. This principle states that the targets of correctional intervention should be those areas of need that are related to recidivism, or that have some relationship to criminal behavior, also called criminogenic needs (Andrews et al., 1990). These are attributes of an individual that, when changed, are associated with changes in the chances of recidivism. In addition, not all needs are criminogenic and targeting non-criminogenic needs should not be expected to impact criminal behavior.

Responsivity principle. The principle of responsivity refers to the responsiveness of the offender to different service options. It recognizes that the impact of various treatment approaches may vary across offenders. The style and mode of service an individual receives should be matched to the learning style of the offender so that their criminogenic needs are targeted in a way that they will benefit from (Andrews et al., 1990).

Effectiveness of the risk, need, and responsivity principles. Studies have been conducted that demonstrate that adherence to the principles of risk, need and responsivity lead to improved criminal justice outcomes, and reduced recidivism. (Andrews & Dowden, 2006; Lovins, Lowenkamp, Latessa, & Smith; 2007; Lowenkamp, Latessa, & Holsinger, 2006) Service delivery to individuals who are higher risk produces larger decreases in recidivism than for offenders who are lower risk, as long as the treatment focuses on criminogenic needs and adheres to effective treatment strategies.

Model of Evidence Based Practices

The research conducted to identify the most effective strategies for correctional intervention is identified as evidence-based practices (EBP). The phrase EBP is not unique to the field of corrections, and many fields, from medicine to plumbing, have identified evidence-based practices for their field. Evidence-based practices represent those strategies that are backed by sound, scientific research, that help achieve the desired goal. In the case of corrections, evidence-based practices represent those strategies that result in sustained reductions in recidivism.

The challenge for correctional agencies, both in the institution and in the community, is to implement those strategies that research has found to be most effective; in other words, to bring research into practice. To assist agencies with this goal, the National Institute of Corrections (NIC) has developed a model for implementing evidence-based practices (Clawson, Bogue, & Joplin, 2005; Crime and Justice Institute, 2009). There are three primary components to the model, and all are considered necessary. The three components include:

1. Evidence-Based Principles: Eight evidence-based principles have been identified that serve as steps, or a road map, for implementing effective correctional interventions. The eight steps include a) assess offender risk and needs; b) enhance offender motivation; c) target interventions; d) address cognitive-behavioral functioning; e) provide positive reinforcement; f) provide ongoing support; g) measure outcomes; and h) provide quality assurance.

2. Organizational Development: It is not enough to implement the evidence-based principles. The model states that sustained reductions in recidivism will not be achieved unless there is an organizational climate supportive of these principles.
3. Collaboration: Corrections agencies do not operate in a vacuum and are not solely responsible for changing offender behavior. These agencies work and partner with other organizations to achieve their goals. In order to be successful, it is important that there is consistency in the strategies used and that all partner organizations are familiar with the evidence-based strategies in order to achieve the most positive results.

While the NIC model indicates that the implementation of evidence-based principles is not enough to achieve sustained reductions in recidivism, the model also shows that risk and need assessment is the foundation of implementing evidence-based principles within an organization. The rest of this chapter will summarize the existing research on risk assessment and the predictors of recidivism that have been incorporated into risk assessment tools.

Purpose and History of Risk Assessment

Risk assessment takes on a critical role for agencies interested in implementing evidence-based practices or effective correctional interventions. Multiple reasons exist for conducting risk assessments. One purpose is the prediction of recidivism, or being able to predict who is likely to engage in continued criminal behavior and who is not (Andrews et al., 1990; Clements, 1996). In this way, risk assessment instruments become tools that can be used to

help identify who to focus attention on through supervision. A second purpose of risk assessment, and one that is less well understood, is for the purpose of rehabilitation. Andrews and Dowden (2006) state "Less well appreciated are the implications of risk assessment for purposes of planning and delivering human services aimed at reduced reoffending (p. 89)."

Hanson (2009) has articulated the qualities that are desired in a risk assessment, which also reflect the multiple purposes of risk assessment. Among the qualities of a good risk assessment are that it provides precise estimates of recidivism risk, informs the development of treatment targets and risk management strategies and engages the offender in the assessment process. The multiple purposes of risk assessment mirror well the multiple goals of probation, increasing their potential as meaningful tools for those responsible for supervising offenders in the community.

Generations of Risk Assessment

Risk assessments have been conducted for a very long time. Initially, assessments relied largely on the professional judgment, intuition, and gut-level feelings of the individual conducting the assessment. Identified as first generation assessments (Bonta, 1996), assessments conducted this way raised questions about accountability and fairness as it was difficult to explain why apparently similar individuals were treated differently. The assessment was subject to considerable personal discretion and the decision rules that were used were unclear (Hanson, 2009).

The second generation of assessments represented a shift from professional judgment to more structured and standardized assessments. These assessments were empirically based but atheoretcial (Andrews et al., 2006; Hanson, 2009). In other words, factors were selected for the assessment because they were statistically relevant, but the selection of these factors was not driven by any specific theory of criminal conduct. In addition, these initial standardized instruments focused primarily on static factors. While standardization helped address concerns about the fairness of decisions based upon risk assessment instruments, the focus on static factors limited their utility. Since static factors are those that do not change, such as age at first arrest, the risk assessment helped predict recidivism and provided information meaningful for establishing a supervision level. However, the information contained in the risk assessment did not help identify meaningful targets for treatment and/or intervention.

The third generation of risk assessments included a broader recognition of the purpose of risk assessment. Risk assessment is not just for the prediction of risk. In order to effectively manage risk, opportunities for rehabilitation, or for the offender to change, must also be provided. The third generation of risk assessments incorporated dynamic risk factors, those that could change over time, into the assessment. The dynamic risk factors included also represent the criminogenic needs of the individual, combining risk and needs into a single assessment tool. This allowed the results of the assessment to be used not only to identify an appropriate level of supervision but also to identify targets for treatment and/or intervention (Bonta, 1996).

The recognition of criminogenic needs as dynamic risk factors that should be incorporated into a single assessment has been recognized as one of the most significant advances in the research on assessment over the past 20 years (Hanson, 2005; Loza & Dhaliwal, 2005). Dynamic risk factors contribute information about risk that is not captured by purely static, historical risk factors. One advantage to including both static and dynamic factors is that the predictive accuracy of the classification system can increase (Flores, Lowenkamp, Smith, & Latessa, 2006). A second advantage is that the utility of the assessment to practitioners in the field is increased as dynamic factors allow the officer to be able to measure change. This allows the information provided by the risk assessment to be used to formulate a risk management plan. Finally, evidence exists that changes in criminogenic needs can correspond to changes in recidivism potential.

Clinical Versus Actuarial Assessment of Risk

The evolution of risk assessment from clinical judgment to structured assessments has led to questions about the accuracy of assessments conducted with each approach. Are decisions based upon actuarial assessments more accurate than those based upon clinical judgment? Multiple studies have been conducted comparing the two approaches. In 1989, Dawes, Faust and Meehl (1989) reported that there were nearly 100 comparative studies in the social sciences, looking at various outcome behaviors. In almost all of the studies, the actuarial method performed better than the clinical method. Sometimes the difference was modest while other times it was substantial. They also reported

that the results did not vary based upon access to information or the experience and expertise of the individual making the judgment.

Similar results were found in a meta-analysis of studies comparing the accuracy of clinical and mechanical (formal or statistical) methods for making judgments or decisions about health or human behavior (Grove, Zald, Lebow, Snitz, & Nelson, 2000). Across the 136 studies that were included in the meta-analysis, 47 percent were found to favor mechanical prediction, 47 percent found mechanical prediction and clinical judgment to perform equally well, and only six percent favored clinical prediction. Overall, the authors concluded that, on average, mechanical predictions are 10 percent more accurate than clinical predictions. In addition, they found that there was a greater advantage for mechanical prediction in the areas of medicine and forensic settings (those that predict criminal behavior). The results of studies comparing the clinical and mechanical approaches to decision-making has led to a widespread recognition and acceptance (at least among researchers and academicians) that actuarial assessments are better predictors of criminal behavior in general and violence in particular (Loza & Dhaliwal, 2005; Mills, 2005).

Predictors of Recidivism

To develop an effective risk/needs assessment tool, it is necessary to identify those factors associated with recidivism. What is assessed can impact the accuracy and utility of classification decisions (Flores et al., 2006). Considerable research attention has focused on identifying predictors of recidivism, or criminal behavior. One of the challenges to identifying the most significant predictors is

how to make sense of multiple, and potentially conflicting studies. Certain factors have routinely been found to be robust predictors of recidivism. Prior research on probationers has identified nine factors consistently associated with probation outcome. These include gender, age, marital status, education level, race, employment, prior criminal history, offense (being a property offender) and sentence length (Morgan, 1993; Morgan, 1994; Sims & Jones, 1997). Other factors that have been recognized as robust predictors of recidivism include early family factors and criminal associates (Gendreau, Goggin, & Paparozzi, 1996; Gendreau, Little, & Goggin, 1996). However, there has been debate about the relative importance of other predictors such as social class of origin, intelligence and personal distress. Meta-analysis has emerged as a research strategy that provides a quantitative, rather than a narrative, way to combine the results of multiple studies to determine the overall impact of a variable. Increased confidence can be found in the results of meta-analyses because the results are not based upon a single study, with a small sample, in a single jurisdiction. Meta-analyses have helped identify the most significant predictors of recidivism.

Gendreau et al. (1996) conducted a meta-analysis to identify the best predictors of adult offender recidivism. They identified studies published between January 1970 and June 1994. Treatment studies, where attempts were made to change offender behavior, were not included. To be included, the study had to have a minimum six-month follow-up period and had to measure outcomes when the offender was an adult. The outcome measure also had to have a no-recidivism category. The outcomes included arrest, conviction, incarceration,

parole violation or some combination of outcomes. Finally, the study had to report statistical information in a way that could be converted to Pearson *r*.

The authors identified 131 studies that produced 1,141 correlations with recidivism. The predictors identified in the studies were sorted into 18 different domains. Ten of the domains were considered static and included: 1) age; 2) criminal history:adult; 3) history of antisocial behavior: preadult; 4) family criminality; 5) family rearing practices; 6) family structure; 7) gender; 8) intellectual functioning; 9) race; 10) socioeconomic status (SES). Seven of the domains were dynamic and included: 1) antisocial personality; 2) companions; 3) criminogenic needs, also considered criminal attitudes; 4) interpersonal conflict; 5) personal distress; 6) social achievement; 7) substance abuse. The final domain was a composite measure which contained information from several predictor domains.

All of the predictor domains were found to have a statistically significant relationship to recidivism. However, certain predictors were stronger than others. The strongest static predictors were adult criminal history (.17) and history of antisocial behavior as a juvenile (.16). The strongest dynamic predictors were companions (.21), criminogenic needs (.18) and antisocial personality (.18). Composite risk scores, which reflect a combination of variables incorporated into an assessment tool, had the strongest relationship to recidivism (.30).

The results of the meta-analysis are significant for a number of reasons. On the one hand, as all of the predictor domains were statistically significant, it confirmed narrative reviews of predictors that have concluded that certain

variables are significant predictors of recidivism, such as age, criminal history, companions, and substance abuse. On the other hand, the meta-analysis raised challenges to some traditional beliefs about predictors. Significant attention had previously been given to static factors as predictors of recidivism, and many risk assessment instruments focused on static risk factors alone. The meta-analysis highlighted that dynamic risk factors are as significant as static factors. When all of the predictor domains were classified as either static or dynamic, and the relationship between the static domains and the dynamic domains to recidivism was assessed, the dynamic domains had a stronger relationship to recidivism (.13 versus .11). In addition, common beliefs were challenged by highlighting the strength of the relationship between each predictor and outcome. While substance abuse is a significant predictor, it does not have the strongest relationship to recidivism. Overall, the meta-analysis highlighted that dynamic factors are as important as predictors of recidivism as static factors, and that risk scales, which combine multiple factors, are better predictors than any single factor alone.

General Risk and Needs Assessment Tools

The results of the meta-analysis on predictors of adult offenders lend support to the development of general risk/needs assessment tools that incorporate both static and dynamic risk factors. One of the most widely used and researched general risk/needs assessment tools is the Level of Service Inventory – Revised (LSI-R), which was initially introduced as the Level of Supervision Inventory (LSI). Studies of the LSI and LSI-R have addressed its ability to inform many different decisions and predict a number of different outcomes, including

probation supervision decisions, decisions regarding placement into halfway houses (Bonta & Motiuk, 1987), deciding appropriate security level classification within institutions, and evaluating rehabilitation programs with offenders. Although the LSI-R was primarily developed on probationers, studies have also looked at the LSI-R with a variety of populations including female offenders (Coulson, Ilacqua, Nutbrown, Giulekas, & Cudjoe, 1996; Smith, Cullen, & Latessa, 2009), sex offenders (Simourd & Malcolm, 1998), young offenders and violent offenders (Hollin & Palmer, 2003). Studies have also been conducted of offenders within different components of the criminal justice system. For example, Flores et al. (2006) found the LSI-R to be a significant predictor of incarceration for a sample of federal probationers across the United States.

Evidence of the predictive validity of the LSI-R has been found across these studies. The ability of the LSI-R to predict multiple outcomes and to be predictive with multiple types of offenders provides support for the notion that using a general risk and needs assessment tool can be an effective strategy for the prediction and management of risk across offender populations.

Specialized Risk Assessment

There is general agreement that risk assessment helps guide decisions about who should receive supervision and treatment services and helps identify the targets of treatment/intervention. However, there is debate about whether or not the same risk factors and the same risk assessment tools are equally predictive across offender populations. The populations perceived as different include females, mentally ill offenders, sex offenders, violent offenders and domestic

violence offenders. Research has been conducted to determine the extent to which predictors of recidivism differ for these populations. Research also has focused on the use and effectiveness of various risk assessment tools with these populations.

Female offenders. Females comprise a much smaller proportion of the criminal population than males. As a result, females are often excluded from research on offender samples. This is true within research on risk assessment as well. Many of the existing assessment instruments have been developed and validated on males and subsequently had their use extended to the female offender population raising the question of whether or not an assessment tool developed for males is also predictive of recidivism for females (Bonta, Pang, & Wallace-Capretta, 1995; VanVoorhis & Presser, 2001).

The evidence to answer this question is mixed. Bonta et al. (1995) looked at the use of the Statistical Information on Recidivism (SIR), an instrument designed and used in Canada to help facilitate parole release decisions, with female offenders within the federal system in Canada (females serving sentences of two years or more). The SIR is a 15-item scale comprised of mostly static, criminal history variables (e.g. age at first conviction, previous incarceration, and previous revocation). Within a small sample of 81 females, although a statistically significant correlation was found between SIR score and outcome, the SIR was not effective at predicting recidivism among female offenders. Those rated a "good" risk, indicating they were less likely to reoffend, had the highest

recidivism rate at 75 percent, while those rated “poor”, or the most likely to recidivate, had a recidivism rate of 44.4 percent.

On the other hand, support has been found for the use of the LSI and LSI-R with female offenders (Coulson et al., 1996; Smith et al., 2009). In their study of the LSI with 526 adult females incarcerated in provincial institutions (those serving sentences less than two years) in Ontario, Canada, Coulson et. al. (1996) found a consistent increase in failure as the LSI level increased. They concluded that the LSI appears to be a robust assessment tool, applicable to both male and female offenders, and suggested it can be used as a decision-making tool with the female offender population. More recently, Smith et al. (2009) conducted a meta-analysis of studies looking at the predictive validity of the LSI-R with female offenders. The study arose out of a debate about whether the predictors of recidivism are general, with similar predictors for males and females, or gender-specific. Across 25 studies they identified 27 effect sizes that involved 14, 737 female offenders. Overall, they found support for the use of the LSI-R with female offenders. There was little variation in the effect sizes for females across studies and the relationship between the LSI-R and recidivism for female offenders was found to be statistically similar to that found for males. At the same time, they also suggested that additional research might uncover gender-specific risk factors that could enhance existing assessment tools (Smith et al., 2009).

This raises a second question about assessments for female offenders. Even if the existing assessment tools are valid for female offenders, are there

additional variables that could be included that are better predictors for female offenders? Would an assessment tool that was designed specifically for women predict recidivism better (VanVoorhis, Salisbury, Bauman, Holsinger, & Wright, 2008)? There are a number of factors perceived as relevant for women that have not been incorporated into existing risk/needs assessment tools. Among the factors considered to be gender-responsive needs are histories of victimization and abuse, relationship problems, mental illness, drug abuse, self-concept, poverty and parental issues (VanVoorhis, Wright, Salisbury, & Bauman, 2010). VanVoorhis et al. (2010) conducted a number of studies to determine whether using a supplement that incorporates gender-responsive needs adds value to a gender-neutral assessment, such as the LSI-R. Studies were conducted across a number of locations (Colorado, Minnesota, Missouri and Maui, Hawaii) and with a variety of offender populations (prison, probation and parole). Overall they found support for gender-neutral assessments and concluded that the LSI-R and other dynamic risk/needs assessments are predictive for women offenders. However, they also found that the targets that are often promoted as most significant (antisocial attitudes and antisocial associates) may not be as important for women as they are for men. Instead, they found that the needs most associated with reoffending in the community for women were substance abuse, economic, education, parental and mental health needs. Finally, they found prediction models could be strengthened by including gender-responsive factors (VanVoorhis et al., 2010).

Mentally disordered offenders. Mentally disordered offenders are perceived as different from a general offender population. This stems in part from different theoretical perspectives that are used to explain criminal behavior for these two groups. Explanations of criminal behavior for non-disordered offenders typically come from sociological criminology, which focuses position in the social hierarchy and variables such as age, race and social class, or social psychological theories focused on individual factors such as criminal companions and antisocial attitudes (Andrews & Bonta, 1998). In contrast, explanations of criminal behavior for mentally disordered offenders have focused on psychopathological explanations with greater emphasis on psychiatric diagnosis and person distress (Bonta, Hanson, & Law, 1998).

It is unclear what the relationship is between mental disorder and crime and attempts have been made to identify what factors are the best predictors of criminal behavior for mentally disordered offenders. Bonta et al. (1998) conducted a meta-analysis that included studies from psychiatry, clinical psychology and general offender research to identify predictors of general and violent recidivism. They identified 58 studies with 64 unique samples and calculated effect sizes for 74 predictors. Those predictors produced 548 correlations with general and violent recidivism. The findings of the meta-analysis lend support to the notion that risk factors are similar across offenders groups and across definitions of recidivism. They found the factors predictive of recidivism for mentally disordered offenders were the same as those for non-disordered offenders, such as criminal history and antisocial personality. They

also found that similar factors predicted general and violent recidivism for mentally disordered offenders. Objective risk assessments were among the best predictors of recidivism. Also significant was the finding that the clinical factors, such as psychological distress, were either not significant or negatively related to recidivism. Overall, greater support was found for social psychological perspectives of criminal behavior and they concluded that the same risk assessment protocol should be used with mentally disordered offenders as with non-mentally disordered offenders (Bonta et al., 1998).

More recently, studies have been conducted to assess the ability of existing risk assessment tools to predict general and violent recidivism for mentally disordered offenders and whether it is important to assess mental health variables (Ferguson, Ogloff, & Thomson, 2009; Gray, Taylor, & Snowden, 2010; Snowden, Gray, Taylor & MacCulloch, 2007). Snowden and his colleagues (2007) looked at the use of existing assessment tools that had evidence of predictive validity with general offenders, and that varied characteristics of the assessment and the items included. One instrument was the Violence Risk Appraisal Guide (VRAG) which is a 12 item tool designed to predict violence and includes mental health measures, including the score from the Psychopathy Checklist-Revised. The other instrument was the Offender Group Reconviction Scale (OGRS), a six-item instrument designed to predict general reconviction that includes only easily scored demographic and criminal history variables. Assessment scores were created from a sample of mentally ill offenders discharged from medium secure facilities in the United Kingdom. The authors

found both instruments were predictive of general and violent reconvictions at levels better than chance. The two instruments were also compared to determine if one was a better predictor than the other. The VRAG was found to be significantly better at predicting general and violent recidivism at short follow-up periods (6 months) but the results were similar over longer follow-up periods leading the authors to conclude that the instruments predicted general and violent recidivism with the same accuracy (Snowden et al., 2007).

While there is support for notions that the same variables are predictive of recidivism for mentally disordered, and non-disordered populations, and the same assessment instruments can be used for mentally disordered offenders, there is still mixed evidence. Ferguson et al. (2009) looked at the validity of the Level of Service Inventory-Revised: Screening Version (LSI-R:SV) for offenders with a major mental illness. The LSI-R:SV is a shorter version of the LSI-R with only eight items. Their study included 208 patients admitted to a forensic psychiatric hospital in the state of Victoria in Australia. The sample included both dually diagnosed offenders, those offenders with a diagnosis of substance abuse and a mental disorder, and those mentally ill offenders that were not substance abusers. They found the LSI-R to be most predictive with non-substance abusers, less predictive, but still better than chance, for the entire sample and not significant for those individuals that were dually diagnosed. While the results may point to the need for the use of the full version of the LSI-R with mentally disordered offenders, it also highlights the potential heterogeneity of this population.

The heterogeneity of mentally disordered offenders was also found in a study looking at the use of the Historical, Clinical, Risk Management–20 (HCR-20) with a sample of mentally disordered offenders from the United Kingdom (Gray et al., in press). They looked at the effectiveness of the HCR-20 across a range of mental health diagnoses and found the instrument predictive of general and violent recidivism but that it was not equally predictive across diagnoses. It was most predictive for individuals with substance misuse disorders and personality disorders. They also found that mental health diagnoses were a significant predictor of future violence.

Sex offenders. Sex offenders are another population where there are mixed opinions about whether the same predictors exist for general recidivism as sexual recidivism. One of the challenges to predicting sexual offending is the low base rate; sexual offending is not a common occurrence. One perspective is that factors relevant to general reoffending are also relevant to sex offenders and there has been a tendency to underutilize general risk/needs assessments with this population (Gendreau et al., 1996). For example, sex offenders do not only commit sex offenses and sex offenders have need areas similar to other offenders such as employment and substance abuse (Simourd & Malcolm, 1998). Simourd and Malcolm (1998) found that when looking at the relationship between LSI-R score and other measures, such as the PCL-R and the General Statistical Information on Recidivism (GSIR), similar relationships were found with sex offenders as with a non-sex offender population. This led them to conclude that "The overall findings of the present study suggest that sex offenders, as a group,

have deficits in many nonsexual risk/need areas that can be adequately assessed by way of the LSI-R" (Simourd & Malcolm, 1998, 271). Similar conclusions were reached by Hepburn and Griffin (2002) in a study of sex offenders on probation. However, it is also believed that there are some factors specific to sex offenders, particularly centering on the offense itself, that are important to assess, that are not part of a general risk/needs assessment. These include deviant sexual preferences, choice of victim, early onset of sex offending and prior sex offenses.

Violent offenders. Attention has also been given to potential differences between violent offenders and non-violent offenders and similarities have been found between the predictors of violent and general recidivism. In their meta-analysis of adult offenders, Gendreau et al. (1996) found that the strongest predictors identified in the meta-analysis also applied to violent offenders. They also found that composite risk measures for general recidivism, such as the LSI-R, correlated highly with measures intended to predict violence. In a sample of 209 incarcerated adult male volunteers in federal institutions in Canada, Mills, Kroner, and Hemmati (2003) explored whether or not the criminogenic domains from the LSI-R predict recidivism equally well for general recidivists and violent recidivists. They found six of the domains related to both violent and non-violent recidivism such as criminal history, education/employment, financial, family/marital, companions and alcohol/drug problems. However, they also found that the emotional/personal domain was related to only violent recidivism and that the domains of leisure/recreation and attitudes/orientation were related to only general recidivism. This led them to conclude that the best risk assessment

will include variables that are specific to the outcome of interest. If the interest is in predicting violence, different factors may need to be included (Mills et al., 2003).

Comparison of assessment tools for specialized populations. Studies have also been conducted to assess the predictive validity of various assessment tools designed to assess risk. In some instances the studies have focused specifically on establishing the predictive validity of the instrument. In other studies, comparisons have been made between multiple assessment tools to determine which instruments are the best predictors.

Bourgon and Bonta (2004) compared a general risk/need assessment tool, the Primary Risk Assessment (PRA), with an assessment tool developed for offenders who are generally assaultive, the Secondary Risk Assessment for General Assault (SRA-GA). Their purpose was to determine if the SRA-GA was predictive of general assault and the degree to which the SRA-GA provided additional explanatory power above and beyond a general risk/needs assessment. Their study included 246 male and 198 female adult probationers from Manitoba, Canada who were considered violent offenders. Violence was determined by either a current violent conviction, a prior assault conviction within five years of their current non-violent conviction, or staff concerns that the individual had a propensity for violence. The outcome variables included general recidivism, measured as any new conviction within two years of the date of the assessment, and violent recidivism, measured as any violent conviction within two years of the date of the assessment. They found that scores on both instruments were

significantly related to general and violent recidivism and that the PRA, a general risk/needs assessment, performed just as well as the specialized assessment. In other words, the specialized instrument added little to the prediction of violent reoffending.

Prediction and Assessment of Domestic Violence

Research on predictors of recidivism and risk assessment instruments with various specialized populations has addressed questions about whether risk can be predicted by the same factors predictive of recidivism in a general offender population and whether risk assessment instruments are predictive of recidivism. The same questions can be asked about domestic violence offenders. Researchers and practitioners alike have perceived domestic violence offenders as different from a general offender population, leading to skepticism about the ability of existing risk assessment tools to accurately predict the risk of domestic violence. Research that has been conducted on domestic violence offenders has looked at the ability of existing assessment tools to predict domestic violence recidivism, the identification of predictors for domestic violence, and the development of assessment tools designed specifically to predict domestic violence.

Use of Existing Assessment Tools with Domestic Violence Offenders

The use of risk assessment tools designed to predict general criminal recidivism and/or violent recidivism has expanded exponentially over the past 20 years and has come to be recognized as an accepted practice in many correctional settings. However, very few studies have looked at the use of these existing tools

with domestic violence offenders. Those studies that have provide mixed results about their use with domestic violence offenders.

One commonly used assessment for the risk of violence, the Violence Risk Appraisal Guide (VRAG) was found to be predictive of violent recidivism within 10 years for a sample of 81 men convicted of assaulting their wives (Hilton, Harris & Rice, 2001). However, the study was not able to determine whether or not the subsequent victims of this violent crime were domestic partners. Another study concluded that the VRAG was a good predictor of the likelihood within the next year of spousal assault recidivism among 88 personality disordered men (Grann & Wedin, 2002).

A study of a revision to the LSI, the Ontario Revision (LSI-OR) has been found to be predictive of recidivism among offenders from a variety of settings in Canada, including institutions, treatment centers, and probation offices (Girard & Wormith, 2004). Using a sample of 454 adult male inmates and 176 adult male probationers who had committed a variety of offenses, including the special populations of sex offenders, domestic violence offenders and offenders with mental health issues, Girard and Wormith (2004) found the LSI-OR to be predictive of recidivism for both institutional offenders and those supervised in the community on probation and parole. They also found support for its use with special populations suggesting that it is appropriate to apply a general risk assessment tool to offenders with a history of domestic violence, to offenders with mental health issues and to sex offenders.

Other studies involving the LSI-R with domestic violence offenders have found different results. In one study, Hendricks, Werner, Shipway, and Turinetti (2006) looked at the ability of the LSI-R to predict recidivism and treatment program completion with a sample of 200 individuals charged with domestic violence in Wisconsin and referred for domestic violence treatment. Recidivism was defined as a record of any offense for domestic violence to an intimate partner. They found the LSI-R to be predictive of treatment program completion. However, the simple correlations between the LSI-R and recidivism were low, raising questions about the efficacy of the LSI-R as an effective predictor of recidivism for the domestic violence population. In another study, Hilton, Harris, Popham, & Lang (2010) found that while the Ontario Revision of the LSI (LSI-OR) was predictive of general recidivism, they did not find it to do better than chance in predicting domestic violence recidivism.

Predictors of Domestic Violence Recidivism

The mixed results from studies using existing risk assessment tools with domestic violence offenders suggests there may be unique predictors of domestic violence recidivism. Some studies have sought to identify those predictors. Olson and Stalans (2001) conducted a study to determine if probationers convicted of domestic violence offenses differed from probationers convicted of other violent crimes. Their study included 124 adult probationers convicted of a domestic violence offense and 287 adult probationers convicted of other violent crimes in Illinois. They found that domestic violence offenders were somewhat older, more likely to be white, have completed high school, have prior adult

convictions and to report a substance abuse history, including alcohol use. However, while there were some differences between domestic violence and generally violent offenders, the risk factors that were significant were still reflective of factors that have routinely been found to be significant across criminal populations. Prior convictions and history of substance abuse were found to be the strongest predictors of recidivism. They discovered little independent influence of the conviction offense to predicting outcomes.

Hanson and Wallace-Capretta (2004) looked at whether the same risk factors commonly associated with recidivism in general are associated with recidivism of male batterers. Their study included 320 abusive men from five community treatment programs across Canada. Recidivism was measured as either an arrest or conviction for a new violent offense, or an arrest or conviction for any new offense. The predictor variables included in the study were those associated with general offenders, spousal assault recidivism and male battering. Some measures included in the study were specific to domestic violence. For example, a family history questionnaire was included that measured abuse in the family of origin. Measures were also included related to marital distress/happiness and the expectation of negative consequences. The factors that had a significant relationship to recidivism included: prior arrests for assault, prior convictions, the criminal history subscale of the LSI-R, and many of the subscales from the LSI-R that measured lifestyle instability such as work/school, finances, accommodation, leisure, criminal peers and substance abuse. Overall, they found that the LSI-R was predictive of both general and violent recidivism and that the

factors associated with violent and general recidivism for male batterers were similar to those found among general criminal populations. The factors that were more specific to domestic violence were not found to be significant. They concluded that the methods that have been developed to assess risk for general offenders can be used to assess risk for male batterers.

A recent study focused on felony domestic violence probationers aimed to find factors correlated with rearrest for a new violent offense (Johnson, 2008). This study included 273 male offenders from a suburban county in Illinois, convicted of a felony domestic violence offense and serving a sentence of 24 months probation. Variables included in the study were those factors that had been found to be associated with general recidivism on probation including race, age, education level, employment stability, address stability, history of substance abuse, and prior criminal record, including both the overall number of prior convictions and the number of prior violent convictions. They also included factors more specific to the domestic violence offense including shared residence status with victim and prior completion of batterer's counseling. The factors found to be significant included age, employment stability, address stability, history of substance abuse, both measures of prior criminal record and shared residence status with the victim. Overall, consistency was found in the factors associated with probation outcomes in general and the felony domestic batterers included in this study.

Kingsnorth (2006) conducted a study of individuals arrested for intimate partner violence to look at the impact of multiple factors on recidivism. Multiple

factors were considered in the study because of inconsistent evidence about their effects on recidivism. Broadly, the factors included could be considered criminal history/offense specific factors, extralegal factors, and factors related to the criminal justice system response. The study, conducted in Sacramento, CA, included only heterosexual couples but did include both male offenders with female victims and female offender with male victims. In addition, only individuals with cases filed as misdemeanors or probation violations were included, excluding cases filed as felonies. This resulted in a sample of 872 cases. Recidivism was defined as rearrest for an intimate partner violence offense within an 18-month follow-up period from the date of the incident. The study found that the extralegal factors in the study, which included cohabitation, substance use, employment, gender, marital status, and age, were unrelated to recidivism when controlling for the legal factors. The study also did not find support for the influence of legal factors on recidivism. These factors included victim support for the decision to prosecute, filing charges, prosecuting the case, imposition of jail time, and mandated participation in a batterer treatment program. The factors found significant were those specific to criminal history or the present offense including prior arrest and the presence of an order of protection. Overall, the results found more support for factors associated with the perpetrator.

Predictors of domestic violence in a treatment setting. Many studies focused on domestic violence offenders have done so in the context of looking at domestic violence treatment. Most recently, Jewell and Wormith (2010)

conducted a meta-analysis to identify which variables predict attrition from domestic violence treatment programs for male batterers. They identified 30 studies published between 1985 and 2010 that looked at in-program attrition. Most of the studies were conducted between 2000 and 2010. Within these 30 studies, most factors studied fall into three categories: demographic variables (e.g. age, ethnicity, education, employment status), violence-related factors (e.g. prior arrests, prior convictions, domestic violence arrests and convictions, severity of abuse), and intrapersonal characteristics (e.g. alcohol and drug use, risk level).

The meta-analysis found that the demographic variables outperformed the violence and interpersonal variables in distinguishing treatment completers from those who did not complete treatment. The strongest predictors included employment, age and referral source (e.g. court-mandated or not). Previous domestic violence offenses, income, drug use and criminal history were modest predictors, and education, marital status, alcohol use, and ethnicity were low predictors. Many factors often associated with domestic violence, including depression and anger, a history of personal abuse or an abusive family did not distinguish those who completed treatment from those who drop out. In general, the authors concluded that the same variables found to predict domestic violence recidivism also predict attrition from domestic violence treatment programs. When these results were reviewed in the context of the risk, need and responsivity principles of effective correctional intervention, the factors most strongly related to attrition from domestic violence treatment reflect those criminogenic needs that are commonly included in risk assessments.

Domestic Violence Risk Assessment Tools

Even though there are similarities in the factors predictive of recidivism across offender groups, and it appears that the same factors may be predictive of general recidivism, violent recidivism, and domestic violence recidivism, efforts to develop assessment tools specific to domestic violence offenders continue. Existing tools that have received the most attention include the Danger Assessment (DA), the Spousal Assault Risk Assessment (SARA), the Domestic Violence Screening Instrument (DVSI), the Ontario Domestic Assault Risk Assessment (ODARA), and the Domestic Violence Risk Appraisal Guide (DVRAG). While all these tools have a goal of predicting domestic violence recidivism, there are a number of variations across the tools. The differences include how the assessment tool was developed, the purpose of the assessment, the sources of information required to complete the assessment, and who will be responsible for data collection. A description of each of these tools is provided.

Danger Assessment. The Danger Assessment (DA) instrument was designed to assess a very specific type of violence, intimate partner homicide. The DA purports to assist battered women assess their danger of being murdered or seriously injured by an intimate partner. Information to complete the assessment comes from the victim.

The items for the DA were initially selected by consulting with battered women, shelter workers, law enforcement, and clinical experts (Campbell, Webster, & Glass, 2009). There are two parts to the assessment. The first part includes a calendar in which victims are asked to identify the dates on which

incidents of violence occurred, to help determine how frequently the violence occurs. The women are also asked to rate the severity of the events. The second part of the assessment includes 15 items rated as either yes or no. A higher number of yes items indicate a greater risk of being a victim of intimate partner homicide. Studies have found evidence of the predictive validity of the DA on outcomes such as reassault.

A revised version of the DA has also been developed based on the results of an 11-city study that included 310 victims of femicide (information was collected through an interview with the victim's proxy), 194 victims of attempted femicide, and 414 victims of abuse by an intimate partner. This study resulted in a number of revisions to the DA. Some items were added that were predictive of intimate partner homicide. Some items were reworded to increase the clarity of the item, and a weighted scoring system was developed that allows for the score to be used to determine the level of danger (Campbell et al., 2009). The predictive validity of the revised DA has also been established and it has been found to be predictive of severe reassault (Campbell et al., 2009). Overall, the DA has been found to be a valuable tool for victims of intimate partner violence to help them make decisions about their safety. It has also been found to be a better predictor than women's perceptions of their own risk.

While the DA has been found to be predictive of reassault in cases of intimate partner violence, the focus of the DA is on the victim. In the criminal justice system, where many risk assessments are conducted, there is limited access to the victim or victim information. For this reason, there is also a need for

risk assessment tools that focus on the information that is readily available about the context and the perpetrator of domestic violence.

Spousal Assault Risk Assessment. The SARA was developed to provide a set of professional guidelines to help those working with domestic violence offenders, because there were no widely accepted and well-validated procedures at that time for assessing violence risk in general and spousal risk in particular. It was designed to help develop case management strategies for domestic violence offenders, not only helping to predict who is likely to reoffend but to help improve treatment planning and supervision decisions (Kropp & Hart, 2000). The SARA includes 20 factors selected on the basis of findings in existing literature and a number of other clinically relevant variables, and contains a combination of static and dynamic variables. Part 1 of the SARA includes ten factors that are related to violence in general. Part 2 of the SARA includes ten factors related to the risk of spousal violence. Information to complete the SARA is gathered through an interview with the offender and review of relevant file information. Also, it may include an interview with the victim. SARA results include a total score, which is the sum of the individual items and the number of risk factors present, the number of items that are rated critical by the individual conducting the assessment and a summary risk rating which is the professional judgment of the assessor about the risk for spousal assault recidivism: low, moderate or high.

In a study of the reliability and validity of the SARA, Kropp and Hart (2000) studied large samples of both inmates (n = 1,010) and probationers (n=1,671) from British Columbia, Canada. All of the individuals were male. A

number of comparisons were made, including comparisons of inmates to probationers, inmates with a history of spousal assault with inmates that did not have a history of spousal assault, and recidivists compared to non-recidivists. The inmates were found to have more risk factors on average than the probationers and were more likely than probationers to receive a summary rating of high risk. Differences were found in the Part 2 items, those specific to the risk of spousal violence, between inmates that had a history of spousal assault and those that did not. Finally, the relationship of the SARA to other measures of general criminal risk (GSIR) and risk for violence (PCL-SV and VRAG) was assessed. Moderate correlations were found on the Part 1 items but not on the Part 2 items, suggesting that the SARA was measuring something different, specifically spousal violence, which was not captured by the other assessment tools. Significant differences were also found between recidivists and non-recidivists on the Part 2 items. The results of the study also suggest that structured professional judgment can be predictive of recidivism and the SARA may provide a structured framework that facilitates reliable coding of professional judgment.

Domestic Violence Screening Instrument. The DVSI was developed by the Colorado Department of Probation Services based upon an analysis of 9000 domestic violence cases sentenced to probation between 1994 and 1996 (Williams & Houghton, 2004). The development strategy used was similar to the one described for developing the Danger Assessment instrument. Input was sought from domestic violence researchers and others in the community, including probation officers, judges, attorneys and individuals from the victim community

(Williams & Houghton, 2004). To create the instrument, these individuals identified social and behavioral characteristics associated with those who have a history of repeated intimate partner violence. The DVSI was developed to be a short tool that could be completed based upon a review of an individual's criminal history, and was not dependent on an offender interview. It was initially used in Colorado as a screening instrument to help with expedited case processing. The DVSI contains 12-items. Each item within the DVSI has multiple response choices that range from either 0 to 2 or 0 to 3, depending upon the item. The scores from the 12 items are then combined into a total score that can range from 0 to 30. Higher scores on the DVSI indicate a higher risk of reoffending, non-compliance and higher risk to victims. The initial study of the DVSI found that the DVSI predicted domestic violence reoffending, and any reoffending significantly better than chance over an 18-month follow-up period.

A revised version of the DVSI, the DVSI-R, has been used in Connecticut. Similar to Colorado, there was a need for an assessment tool that could be used within a work environment that was characterized by hectic, demanding, and time-constrained conditions (Williams & Grant, 2006). In this case, the assessment was conducted by family relations counselors. The DVSI-R contains 11 items, rather than the original 12, and adds a summary risk rating (low, moderate, or high risk). The revisions were made based upon a study of a large sample of 14,970 risk assessments generated between September 1, 2004 and May 2, 2005, which represented the full population of perpetrators of intimate partner violence 16 years and older across the State of Connecticut (Williams &

Grant, 2006). The large sample allowed them to look at a number of different issues including whether DVSI-R scores varied by demographic variables (gender, age, and ethnicity) and if there were differences in DVSI-R scores across different types of intimate violence. There were a number of interesting findings in the study. First, the study established the ability of the DVSI-R to predict repeat violence, as measured by re-arrest and reassessment for a domestic violence offense within the follow-up period. The Area Under the Curve (AUC) coefficient for the DVSI-R total score and repeat violence was .71, which is considered to be a moderately strong finding. Second, findings suggest that the DVSI-R is a robust assessment tool that can be used across a number of populations and across types of domestic violence. Third, the results point to a weak relationship between DVSI-R scores and demographic characteristics, indicating that the DVSI-R scores differ little across age, between men and women or across different ethnic groups. Finally, the study found that the type of violence (intimate partner violence vs. other forms of intimate violence) did not affect DVSI-R scores (Williams & Grant, 2006).

Ontario Domestic Assault Risk Assessment. The ODARA is an assessment tool initially designed to predict male-to-female marital violence with a focus on risk prediction as a means to protect the victim (Hilton et al., 2004). While the assessment tools previously described were developed based upon literature reviews or consultation with professionals working in the field, the ODARA was developed using actuarial strategies to select the items included as predictors. Actuarial strategies to develop risk assessment tools involve selecting

predictor items on the basis of their association with key outcomes. In addition to using actuarial methods to develop the ODARA, an additional goal was to develop an instrument that could be completed quickly by police officers or courts dealing with domestic violence cases. As a result, only information readily available to police officers responding to incidents of domestic assault and information maintained in criminal records management systems were considered for inclusion as variables in the ODARA (Hilton et al, 2004). The resulting assessment instrument contains 13 items that were empirically selected. They include some items that are specific to domestic violence while others are not offense specific.

Initial studies using the ODARA have focused on a very specific population of offenders. The initial sample of 589 offenders included men from Ontario, Canada, who had a police report that contained evidence of forceful physical contact against a current former or common-law wife. The incident did not have to result in an arrest or charge for the offense. In addition, only cases in which the victim and offender lived together were included. In the initial validation study, the ODARA performed better than either the DA or the SARA in predicting wife assault recidivism. Subsequent studies of the ODARA with additional samples, including a population of incarcerated domestic violence offenders, have also found support for the predictive accuracy of the assessment tool (Hilton & Harris, 2008; Hilton et al., 2010).

Domestic Violence Risk Appraisal Guide. The Domestic Violence Risk Appraisal Guide (DVRAG) was developed as an extension of the ODARA. As

the ODARA was developed to be used by frontline police officers, there was a belief that the risk of wife assault might be more accurately assessed by including additional information that is available to probation officers and other criminal justice professionals. Hilton, Harris, Rice, Houghton, & Eke (2008) conducted a study to determine if the prediction of wife assault recidivism and its severity could be improved by adding more detailed clinical information to the ODARA. In the study they looked at tools that were specifically designed to assess domestic violence, including the SARA, the DA and the DVSI. They also looked at tools designed to assess violence in general, including the PCL-R and the VRAG. An initial sample of 303 men from Ontario, Canada, who had a police record of assault against a female cohabitating partner or ex-partner and who also had a more detailed correctional case file were used to identify factors that might improve the ODARA. A separate sample of 346 men from the same area and with the same characteristics was used to validate the new tool. The study found that all of the existing assessment tools that were included in the study were significantly and positively associated with wife assault recidivism, as measured by any incident of assault against a current, former or common-law wife that was recorded in a police report, regardless of whether the individual ended up being arrested, charged or convicted. All instruments except the DA were also associated with continuous measures of wife assault recidivism. When Hilton et al (2008) paired the ODARA with the other formal assessment tools, only the PCL-R was a consistent contributor. As a result, the PCL-R was selected as the most likely to improve upon the ODARA in the prediction of wife assault

recidivism. The resulting DVRAG is 14 items that includes the ODARA plus the PCL-R. The DVRAG was found to be significantly related to each of the outcome variables and was a statistically significant improvement over the ODARA score alone.

Comparison of the Characteristics of Domestic Violence Risk Assessment Tools

Research on existing domestic violence risk assessment tools has found evidence that each has the ability to predict domestic violence recidivism. The predictive validity of each tool is measured most commonly using the Receiver Operating Characteristic (ROC) and reporting the Area Under the Curve (AUC). The AUC identifies whether the instrument predicts outcomes better than chance. The AUC values reported for the assessment instruments have varied. Grann and Wedin (2002) found marginal improvements over chance for the SARA, although the AUC values increased with the length of the follow-up period from .52 at six months to .65 at five years. The AUC for the DVSI was also modest with an AUC for domestic violence offending of .61 and for total offending of .65 (Williams & Houghton, 2004). The AUC for the DVSI-R was better at .71 (Williams & Grant, 2006). The AUC for the ODARA has ranged from .64 to .77 across multiple studies (Hilton & Harris, 2005; Hilton et al., 2010; Hilton et al., 2008; Hilton et al., 2004). The AUC for the DVRAG was found to be .71 in the construction sample and .70 in the cross-validation sample (Hilton et al., 2008). The highest value reported across studies of domestic violence risk assessment instruments was for the DA-R, which reported an AUC of .92.

A few studies have also allowed for comparisons across the tools. In research to develop the DVRAG Hilton and her colleagues (Hilton et al., 2008; Hilton et al., 2010), included each of the domestic violence risk assessment tools as a means to compare the predictive validity of each within a single study. Each of the assessment instruments was found to be significantly and positively associated with a dichotomous measure of wife assault recidivism defined as whether or not there was a police report with evidence of a subsequent assault against a current, former, or common-law wife. In addition, all of the risk assessment tools except the DA were significantly and positively correlated with wife assault recidivism as measured by the total number of assaults in the follow-up period and the number of incidents with severe violence, as defined by the Revised Conflict Tactics Scale.

When each of the assessment instruments have been found to be predictive of domestic violence recidivism, other features of the assessments are likely to factor into the decision of which assessment to use. The DVSI and the ODARA were designed to be administered quickly, recognizing that there might be limited information available. The ODARA was developed for use by frontline police officers while the DVSI was developed to be completed based upon a review of the individual's criminal history. Other assessments such as the SARA and the DVRAG require more in-depth information, which may make them limited in their practical utility. The DVRAG in particular requires more clinical skill as one of the items in the assessment is the PCL-R. The DA was designed as an interview with the victim, which may limit its applicability in certain settings.

Another consideration is the workload required to complete the assessment. While the length of all the tools is fairly similar, ranging from 11 items on the DVSI-R to 20 items on the DA-R and the SARA, there are variations in the expected length of time and effort required to complete the assessment.

Comparison of Domestic Violence Risk Assessment Tools to Existing Assessment Tools

One final consideration is how risk assessments developed specifically for domestic violence perform compared to existing assessments developed for purposes other than predicting domestic violence recidivism. Do the specialized risk assessments for domestic violence add value above and beyond a general risk/needs assessment? Only one study was found that made this direct comparison. Hilton et al. (2010) conducted a study of incarcerated male domestic offenders in Ontario, Canada, that compared the ODARA with the Ontario Revision of the LSI (LSI-OR). They found that while the LSI-OR predicted general recidivism, the ODARA performed better than the LSI-OR in predicting domestic violence recidivism, as measured by the Receiver Operating Characteristic (ROC), suggesting there may be value added by conducting specialized domestic violence risk assessments.

Conclusion

Significant advances have been made in the art and science of risk assessment over the past 50 years. Today risk assessment is recognized as a key element of evidence-based practices and effective correctional intervention. Many of the most significant predictors of recidivism and the factors that have

been incorporated in risk assessment tools are consistent with, and guided by, the psychology of criminal conduct. There is widespread agreement that formal, statistical approaches to assessment are more accurate predictors of criminal behavior than unstructured clinical judgment. The purpose of risk assessment has expanded beyond risk prediction to include risk management and as a result, contemporary assessment tools should incorporate both static and dynamic risk factors.

There is less agreement today with regard to whether specialized populations require specialized assessment tools. Domestic violence offenders are one such specialized population about which this issue has been debated and for which several instruments have been developed. Studies report some level of predictive validity for each of these instruments so often the decision to adopt one instrument over another is based on differences in the ease and cost of use. At the same time, significantly less research has been conducted on risk assessment for domestic violence so gaps exist in our knowledge about domestic violence risk assessment. The limitations of existing studies and unanswered questions about risk assessment for domestic violence offenders will be discussed in the next chapter.

Chapter 2

THE RESEARCH PROBLEM

Risk assessment instruments are recognized as essential tools for predicting reoffending behavior and identifying targets for treatment and intervention. Research has found evidence of the effectiveness of existing tools for predicting a variety of outcomes across different offender populations. However, minimal research on risk assessment has occurred with domestic violence offenders. Campbell et al. (2009) highlighted the scarcity of research on domestic violence offenders by noting that there are far fewer studies of risk assessment in the field of intimate partner violence, compared to other populations. They reported identifying 95 rigorous prospective studies of sexual assault reoffending compared to nine comparable studies of intimate partner violence. The existing research on risk assessment with domestic violence offenders has provided some evidence of the validity of specialized risk assessment tools developed for this population. However, very few comparisons are made between general risk and needs assessment tools and specialized domestic violence risk assessment tools to determine what value is added through specialized assessment. Overall, the studies that have been conducted have increased our knowledge of risk assessment for domestic violence offenders but limitations exist and the research gaps must be addressed in order to expand this knowledge.

Study Limitations and Gaps in Knowledge

Studies of risk with domestic violence probationers can be categorized two ways. The first are studies that aim to identify predictors of domestic violence recidivism independent of any risk assessment tool (Hanson & Wallace-Capretta, 2004; Johnson, 2008; Kingsnorth, 2006; Menard, Anderson & Godbolt, 2009; Olson & Stalans, 2001). Second are studies that assess the validity of a particular assessment tool for domestic violence recidivism (Campbell et al., 2009; Grann & Wedin, 2002; Hilton & Harris, 2009; Hilton et al., 2010; Hilton et al., 2007; Hilton et al., 2004; Kropp & Hart, 2000; Williams & Grant, 2006; Williams & Houghton, 2004). A review of the characteristics of both types of studies helps identify the limitations of existing studies and helps identify unanswered questions about the assessment of risk for domestic violence offenders. The characteristics can be divided into two groups that include features of the study design and what/who were studied.

Characteristics of Study Design

The characteristics of the study design include the location where the research was conducted, sample selection and sample size, length of follow-up period, and method of data collection.

Research location. Much of the research generated on effective correctional supervision and risk assessment has been conducted in Canada. The literature on domestic violence risk assessment is no exception. Studies conducted of the SARA (Kropp & Hart, 2000), the ODARA (Hilton & Harris, 2009; Hilton et al., 2010; Hilton et al., 2004) and the DVRAG (Hilton et al.,

2007) have been conducted across Canada from British Columbia to Toronto to Ontario. An additional study of the SARA took place in Sweden (Grann & Wedin, 2002).

Studies of the DA (Campbell et al., 2009) and of the DVSI (Williams & Grant, 2006; Williams and Houghton, 2004) have been conducted in the United States across various settings. The validity of the DA-R was determined in a study across 11 cities (Campbell et al., 2009). Other locations where studies have been conducted include four judicial districts in Colorado (Williams & Houghton, 2004), and the State of Connecticut (Williams & Grant, 2006). The predictor studies have also taken place across a variety of locations in the United States from Illinois (Johnson, 2008; Olson & Stalans, 2001), to Nebraska (Menard et al., 2009) to Sacramento County, California (Kingsnorth, 2006).

The limited number of studies means there are limited locations where evidence of the effectiveness of the various domestic violence risk assessment tools exists. While these studies lend support to the predictive validity of each of these tools, it is important to ensure that a tool is valid on the population it is being used on. Differences in the characteristics of individuals across geographic locations means that an assessment tool that is valid in one location or jurisdiction may not be effective in another. This was discovered by Ashford and LeCroy (1988, 1990) as they evaluated the validity of a juvenile risk assessment instrument being promoted as a model system. Additional studies are needed, across different locations, to increase our confidence in generalizability of the domestic violence risk assessment tools that have been developed.

Sample selection and sample size. Similar sampling strategies were used across studies and required the identification of a group of individuals who had committed an act of domestic violence. One exception to this strategy was the research conducted on the DA-R (Campbell et al., 2009) which required a sample of victims. In most studies samples were identified from cases at a point in the criminal justice process. In some studies this was the point at which a police record was made of the incident, regardless of whether or not charges were filed and existing police records management systems were used to identify these individuals (Hilton & Harris, 2009; Hilton et al., 2010; Hilton et al., 2007; Hilton et al., 2004). Other studies identified individuals after arrest or as they were processed through various court departments such as the county attorney or district attorney's office (Kingsnorth, 2006; Menard et al., 2009; Williams & Grant, 2006; Williams & Houghton, 2004). In some instances domestic violence offenders were identified after the point of conviction and they were either on probation (Johnson, 2008) or had already completed probation (Olson & Stalans, 2001). Finally, some studies identified individuals through a referral or participation in treatment (Grann & Wedin, 2002; Hanson & Wallace-Capretta, 2004; Hendricks et al., 2006). In these situations, not all of the individuals in the sample had been processed through the criminal justice system.

Most of the studies focused exclusively on male offenders. Exceptions to this are Kingsnorth (2006) who included both males and female offenders who were part of heterosexual couples and Williams and Grant (2006) who included the full population of perpetrators of intimate violence age 16 years or older for

the State of Connecticut during the study timeframe. Once the sample of males was identified, most studies did not identify any further exclusions, although two studies identified that cases with critical information missing, or where the files did not have enough information to score the assessment, were excluded (Hilton et al., 2010; Kingsnorth, 2006). Only one study discussed selecting a random sample of offenders, once the larger pool of offenders for the study time period had been identified (Menard et al., 2009).

The resulting sample sizes varied across the studies from the smallest sample of 88 (Grann & Wedin, 2002) to the largest sample of 14,970 (Williams & Grant, 2006). Other large samples included 1,465 (Williams & Houghton, 2004) and 2,681 (Kropp & Hart, 2000). The sample sizes of the other studies ranged from 150 to 872. Overall, the sample size of the studies has been sufficient to allow for the types of statistical analyses that have been conducted, increasing confidence in the results.

Length of follow-up period. Just as the sample sizes across studies varied, so did the length of the follow-up period. A few studies did not have a designated follow-up period. In Campbell et al.'s (2009) study of the DA-R, cases were selected based upon the outcome of femicide, attempted femicide or abuse. Two other studies only looked at individuals while they were under probation supervision (Johnson, 2008; Olson & Stalans, 2001). Across the other studies, the shortest follow-up period was in the validation of the DVSI-R (Williams & Grant, 2006). Cases were followed through the duration of the eight month study resulting in differences in the length of time available for recidivism

depending on when the individual entered the study. Hendricks et al. (2009) reported on recidivism at six, 12 and 18 months following completion or withdrawal from treatment. All other studies had a follow-up period of a minimum of 18 months (Kingsnorth, 2006; Williams & Houghton, 2004) and many had follow-up periods of five years or longer (Grann & Wedin, 2002; Hilton et al., 2010; Hilton et al., 2007; Hilton et al., 2004; Menard et al., 2009). Overall, the length of time that individuals were followed in existing studies is adequate to assess recidivism. Recidivism research has found that long follow-up periods may not be necessary as many people who do reoffend do so quickly. As a result, useful information about recidivism can be obtained from studies with short follow-up periods (Cattaneo & Goodman, 2005).

Method of data collection. The methods of data collection varied across studies. The two primary data collection strategies included data collected by researchers and data collected by staff as part of their daily work. Differences in the two strategies merit some discussion.

Data collection by researchers. In studies where researchers had primary responsibility for data collection, relevant information was coded from a review of existing records or files, rather than through an interview with the offender. This strategy was used across all of the studies that included the ODARA and the DVRAG (Hilton & Harris, 2009; Hilton et al., 2010; Hilton et al., 2007; and Hilton et al., 2004). Studies of the SARA also incorporated this strategy. Grann and Wedin (2002) obtained SARA scores retrospectively from files reviewed by a bachelor's level psychology student. Kropp and Hart (2000) used research

assistants to code some of the information in their study of the SARA. One advantage of this method of data collection is increased certainty in the reliability of the data collected. For example, tests of inter-rater reliability were often conducted across assessors to ensure the consistency of the information collected. A disadvantage of this approach is that the methods used to score the assessment tools do not mirror the conditions in which assessments are completed within criminal justice environments and may not be representative of the assessments that are actually used to guide criminal justice decisions.

Data collection by staff. The second data collection strategy used the assessments completed by staff in the course of their daily work. Data collected in this way mirrors the conditions under which assessments are used in criminal justice settings. Kropp and Hart (2000) incorporated some assessment scores coded by probation officers, treatment staff and correctional staff in their study of the SARA. This strategy was also used in studies of the DVSI (Williams & Grant, 2006; Williams & Houghton, 2004).

One concern raised about this method of data collection is the quality of the assessments. Studies of inter-rater reliability on assessments conducted in the field are rare, raising questions about the accuracy of assessments conducted in the field. Attempts have been made to assess the quality of risk assessments completed by staff in the course of their daily work activities. Flores et al. (2006) looked at issues of quality assurance with the LSI-R. They acknowledged that the LSI-R has been established as a valid assessment tool for the prediction of general and violent recidivism. However, they also recognized that how well the LSI-R

predicts criminal behavior may depend on the integrity and quality of its implementation. Factors perceived to be important to the quality of the assessment conducted were formal training and the length of experience using the assessment. In a study of 2,030 adult felony offenders from residential correctional facilities in a Midwestern state, they found a significant relationship between the LSI-R score and the measures of quality assurance. When the LSI-R was completed by individuals who received formal training on the use of the assessment, the total LSI-R score was significantly related to reincarceration. The LSI-R score for assessments completed by individuals who had not been trained was not significantly related to reincarceration. The length of experience using the assessment was also found to be important. While a statistically significant relationship was found between LSI-R score and reincarceration regardless of how long the assessment had been in use, there was a stronger relationship between LSI-R score and reincarceration when the assessment had been used for three or more years. These findings suggest that training and experience increase the quality of assessments conducted. They also highlight that assessments of quality conducted by staff charged with using the assessment on a daily basis can be effective at predicting recidivism.

A potential advantage also exists to using the assessments conducted by staff in the course of their daily activities. These assessments represent the assessments that are used to guide decisions throughout the criminal justice system. It is important to understand how domestic violence risk assessment tools perform under these conditions. The value of this approach is also recognized by

researchers who have engaged in data collection through file reviews. Hilton et al. (2010) suggest that an area of future research should be using assessment scores completed by regular institution staff in the course of their daily work activities.

What Was Studied

Other limitations of existing studies, and areas where there are gaps in knowledge, can be found by looking at what was actually studied. This includes the specific populations studied, the variables and definitions used and the types of comparisons that have been made across assessment tools.

Definition of domestic violence. The definitions of what constituted domestic violence varied across the studies. In some instances domestic violence was not specifically defined except for a reference to how the cases were identified. For example, in their study, Menard et al. (2009) included cases processed through the domestic violence unit of the county attorney's office. Neither a detailed description of the types of cases, nor the used to determine which cases were processed through this unit were provided. The same is true for Kingsnorth's (2006) study on cases going through specialized domestic violence court. Where specific definitions of domestic violence were provided, they were often very specific. For example, in Hilton et al. (2007) the focus was specifically on intimate partner violence (IPV). An act was characterized as IPV if there was a police report that the perpetrator "…committed an act of physical assault or credible threat of death with weapon in hand in the presence of a victim who was a current or former wife or common-law wife" (p. 152). Based upon this

definition, non-spousal victims, non-violent acts and incidents between individuals who had not lived together were excluded.

There is limited research on other types of violence that might be considered domestic including acts of violence that occur between parent/child, siblings or within other family relationships. However, states have developed statutory definitions of domestic violence that are much broader than IPV, and these definitions are often used to determine who is supervised as a domestic violence offender. For example, in their study of probationers in Illinois, Olson and Stalans (2001) reported that the Illinois definition of domestic violence was an act of physical abuse, including intimidation or harassment, against family or household members or persons involved in a dating relationship. This leaves the definition open to relationships beyond a spouse or intimate partner. Just as it is valuable to use assessments that have been conducted in the contexts where criminal justice decisions are made, it is valuable to define domestic violence in ways consistent with how it has been operationalized in the field.

Population studied. The use of very specific definitions of domestic violence has also led to studies of very specific populations. Perhaps the most specific definition found was men with a police record of assault against a female cohabitating partner or ex-partner that also had a more detailed correctional system case file, such as a probation file or a presentence report (Hilton et al., 2007). The majority of other studies also focused on male offenders (Grann & Wedin, 2002; Hanson & Wallace-Capretta, 2004; Hilton & Harris, 2009; Hilton et al., 2010; Hilton et al., 2004; Johnson, 2008; Kropp & Hart, 2000; Williams&

Houghton, 2004) with very few including females (Kingsnorth, 2006; Williams & Grant, 2006).

In most studies the criminal justice system was the setting used to identify samples of domestic violence offenders. However, not all of the studies included samples of abusers that had been processed through the criminal justice system. In some instances, the sample was defined based upon the behavior of the individual and not a formal criminal justice label received through a specific criminal justice process. For example, Murphy, Morrel, Elliott and Neavins (2003) looked specifically at individuals in group treatment for men who have been violent towards their partners. Of the 82 participants in the sample, 68 percent were court-ordered to treatment, 8 percent had a court case but were not mandated to treatment, and 23 percent were participating in treatment with no court involvement. Hanson and Wallace-Capretta (2004) also recruited abusive men from community treatment centers where not all of the men had a criminal record for their abusive behavior. It is possible that the predictors of those who are formally processed by the criminal justice system look different than those who are not.

There has also been minimal attention given to domestic violence offenders supervised on probation. Johnson (2008) noted that a common sentence for domestic violence offenders is some type of domestic violence treatment, such as a batterer's intervention program, and community supervision. As most individuals convicted of a domestic violence offense are supervised in the community, research focused on risk factors for domestic violence offenders

should focus on probationers and probation programs. However, there has been limited research attention focused specifically on domestic violence probationers and probation outcomes.

Overall, the populations studied have provided evidence of the predictors of domestic violence recidivism and of the predictive validity of a number of domestic violence risk assessment tools. However, studying a narrow population of domestic violence offenders raises questions about the generalizability of these tools to the contexts in which they are most likely to be used. Studies need to be designed to include the populations that are most likely to be assessed with these instruments and subject to decisions based upon the results.

Definition of recidivism. How recidivism is defined can have a significant influence on the results and the rates of recidivism that are reported. Definitions of recidivism varied across the studies. Some studies defined recidivism in terms of general criminal or violent behavior without a focus specifically on domestic violence. Olson and Stalans (2001) captured three measures of recidivism in their study of probationers: technical violations of probation, arrest during supervision, and probation revocation. The recidivism rates were 37 percent, 32 percent, and 13 percent, respectively. The more broadly recidivism was defined (e.g. technical violations), the higher the recidivism rate. Hanson and Wallace-Capretta (2004) captured general recidivism defined as charge or conviction for any offense and violent recidivism, defined as a charge or conviction for any violent offense. Recidivism rates were 25.6 percent and 17.2 percent respectively. Recidivism rates also varied across samples. Johnson

(2008) found that 41 percent of the felony domestic violence offenders in his sample were rearrested for a new violent offense while on probation.

What is often of greatest interest with domestic violence offenders is the ability to predict whether or not the individual will commit another act of domestic violence. Most studies included measures of recidivism specific to domestic violence. The definitions differed based on the standard of evidence that was required to be considered an act of domestic violence recidivism. The definitions ranged from reconviction (Grann & Wedin, 2002), to rearrest (Hendricks et al., 2006; Kingsnorth, 2006; Williams & Houghton, 2004) to a formal record of an incident that did not require the individual to be charged, arrested or convicted (Hilton et al., 2007).

The type of offense considered to be an act of domestic violence also varied. In some instances recidivism was defined specifically as wife assault recidivism and required an assault against a current of former wife or common-law wife (Hilton et al., 2007). Grann and Wedin (2002) defined recidivism as a reconviction for spousal assault. Spousal assault was hands-on or hands-off violent behavior involving a victim with whom the subject had an intimate, sexual relationship. In other instances there was more variation in the types of offenses that were counted as domestic violence recidivism. Menard et al. (2009) included any type of crime as long as the victim and offender were in an intimate relationship and the county attorney's office flagged the case as a domestic violence incident. Hendricks et al. (2006) included an arrest of any offense for

domestic violence to an intimate partner. The most common offenses included disorderly conduct, battery, and criminal damage with a domestic qualifier.

Broad definitions of domestic violence recidivism are often preferred to narrow definitions because many incidents of domestic violence do not get processed through the criminal justice system. Even requiring a police report or record of the incident may be too narrow a definition because a great deal of domestic violence goes unreported. Victim reports of subsequent violence are considered a potentially meaningful source for obtaining recidivism data. However, there are challenges to obtaining this information from victims and criminal justice databases remain one of the most accessible sources of information for measuring domestic violence recidivism.

A final consideration of definitions of recidivism is how recidivism is measured. In most studies, recidivism was defined as a dichotomous variable; either the person recidivated or they did not. There is some question whether or not a dichotomous measure of recidivism provides enough information about the nature of subsequent incidents of violence. Therefore, some studies have also incorporated continuous measures of domestic violence recidivism to help assess the frequency and severity of violence. These measures have included the number of assaults and the number of incidents with severe violence (Hilton et al., 2007). Having multiple victims, in cases of family violence, has also been used as a proxy to assess the severity of violence (Williams & Grant, 2006).

Variables included in the study. The studies varied in the number of variables included in the models developed to try to predict either domestic

violence recidivism specifically, or different types of recidivism committed by domestic violence offenders. Some studies focused on testing the predictive validity of a particular assessment tool, and although they included basic descriptive information about the sample, these variables were not included in any predictive models (Campbell et al., 2009; Grann & Wedin, 2002). Other studies incorporated a wide range of variables that have been predictive of recidivism. The broad categories of variables included demographics, general criminal history, case processing, offense specific characteristics, and scores from various assessment tools. Consistent with the belief that both static and dynamic factors should be included in risk assessment tools, the variables in these studies incorporated both static and dynamic risk factors.

The dynamic nature of certain variables has been acknowledged and efforts have been made to both identify whether dynamic factors make a unique contribution to the prediction of risk (Mills et al., 2003) and to highlight dynamic factors that can become targets of treatment or intervention, with the goal of changing offender behavior. However, even though dynamic variables are incorporated into the study, very few studies have made an effort to study how the changes across these dynamic variables or changes in risk scores, impacts recidivism. Mills et al. (2003) coded each item within the LSI-R as either static or dynamic in their study of 209 volunteers from a population of incarcerated adult males. They concluded that the dynamic variables made a unique contribution in the prediction of risk. However, in that study, the dynamic

variables were measured at only one point in time, essentially treating them as though they were static variables (Jones, Brown, & Zamble, 2010).

Studies that have incorporated change in risk score as a variable have had small samples. Two studies with the LSI have looked at changes in LSI scores and future criminal behavior. One included a sample of 57 probationers assessed at intake and 12 months later. With a minimum six month post-probation follow-up, the authors found those who showed reductions in LSI scores also showed reductions in criminal behavior. A second study with a sample of 54 inmates released from prison, found similar results. It is recommended that future research look at the dynamic predictive validity of change scores on assessment tools that incorporate both static and dynamic risk factors (Girard & Wormith, 2004). There is a need to show that the dynamic variables are changeable and that the change is related to recidivism (Mills, 2005; Mills et al., 2003).

Direct comparisons between domestic violence risk assessment tools and other risk assessment tools. Few studies have engaged in direct comparisons between the predictive validity of tools designed to predict domestic violence recidivism and assessment tools developed for general or violent recidivism. Hilton et al. (2007) compared the greatest number of assessment tools within a single study. They included the DVRAG, ODARA, SARA, DA, DVSI, PCL-R and VRAG. All of the assessments were found to be predictive of a dichotomous measure of wife assault recidivism. While the strength of the relationship was higher for some instruments, the study did not point to the superiority of one assessment over another. Grann & Wedin (2002) also looked at

the SARA in comparison to the PCL-R and the VRAG. They discovered that the SARA was correlated with both the PCL-R and the VRAG but found that most of the shared variance came from the Part 1 measures in the SARA which assess violence in general. Little of the shared variance came from the Part 2 items which are specific to domestic violence, suggesting that the SARA is measuring something unique compared to instruments designed to assess violence more generally. However, they also found that in some of the follow-up periods of the study, the measures of general violence did better predicting reconvictions for partner violence than the SARA.

Only one study was found making a direct comparison between a risk assessment for domestic violence and a general risk/needs instrument. Hilton et al. (2010) conducted a study of the ODARA and the LSI-OR. They found that the ODARA was better than the LSI-R at predicting domestic violence recidivism. However, the LSI-OR was better at predicting violence when the relationship between the victim and offender was unknown.

The lack of studies that provide direct comparisons between the domestic violence specific assessment tools and other assessment tools means it is largely unknown if separate assessments need to be conducted with domestic violence offenders and if they make a contribution above and beyond a general risk and needs assessment. More comparisons of this nature need to be conducted as similarities continue to be identified across the predictors of recidivism for various populations and because of the practical implications for the field if multiple assessments do not have to be conducted.

The Current Study

The study limitations and gaps in knowledge identified in the existing research on the prediction and assessment of risk for domestic violence offenders highlights the need for studies to be designed that take into consideration the context of where domestic violence risk assessments are going to be used. Existing studies have expanded our knowledge of the predictors of domestic violence recidivism and identified risk assessment instruments that have the ability to predict domestic violence recidivism. However, many of these studies do not mirror the real world conditions where these assessments will be implemented and used to guide criminal justice decisions.

Assessments conducted by individuals working in these environments, on the populations they define as domestic violence offenders, need to be conducted to see how the assessments perform in real world applications. This is essential in order to effectively bring research into practice. This study provides such an opportunity. This study will look at the utility of risk assessment instruments to guide decisions in community supervision by looking at the use of a general risk/needs assessment tool and specialized assessment tools developed to assess domestic violence by a large, urban probation department.

Context of the Study

The study will be conducted in the context of the Maricopa County Adult Probation Department (MCAPD). Maricopa County represents the Phoenix Metropolitan area. The MCAPD provides probation supervision to adults sentenced in the Superior Court of Maricopa County. At any given time, active

probation supervision is provided to approximately 22,000 individuals on standard probation and 900 individuals on intensive probation. Approximately 600 individuals are supervised at any given time on specialized domestic violence caseloads.

Use of Risk Assessment Tools

The Maricopa County Adult Probation Department is an organization that has made a commitment to implementing the Integrated Model of Evidence-Based Practices developed by the National Institute of Corrections. As part of the implementation of this model, the MCAPD has implemented risk and needs assessment tools to help guide supervision and case planning decisions. The assessments used include a general risk and needs assessment tool developed internally called the Offender Screening Tool (OST) at the time of the initial assessment and the Field Reassessment of the Offender Screening Tool (FROST) at the time of reassessment. The MCAPD has also implemented the use of a specialized domestic violence risk assessment tool, the DVSI, with domestic violence offenders.

The OST and the FROST. The Maricopa County Adult Probation Department utilizes a general risk/needs assessment tool on all individuals placed on supervised probation, regardless of the offense committed. The initial assessment tool is called the Offender Screening Tool (OST). Reassessments are conducted using the Field Reassessment of the Offender Screening Tool (FROST). Although the two instruments have different names, they are identical, including the same risk factors across the same domains, and employing the same

scoring criteria. The OST and FROST were developed internally by the MCAPD in consultation with recognized experts in the field of risk assessment. Multiple factors went into the department's decision to develop its own tool rather than using an existing tool that had already been validated, such as the LSI-R. One of the primary reasons was that the department wanted a tool that could be easily incorporated into the existing presentence interview process. More importantly, the department wanted to ensure that the assessment was viewed as meaningful to staff. Engaging staff in the process of developing the assessment was a strategy used to help gain buy-in (Ferguson, 2002). Preliminary evidence of the validity of the instruments has been established (Latessa, Lowenkamp, & Bechtel, 2008) and the OST and FROST are currently used by all adult probation departments across the State of Arizona. The MCAPD began using the OST in 1998 and the FROST in 2005. Prior to the implementation of each assessment tool, staff responsible for conducting the assessments received formal training.

The OST and the FROST each contain 44-items across 10 different categories. Each item is scored dichotomously as either a zero or a one. A score of zero indicates that the risk factor does not exist. A score of one indicates the presence of a risk factor. The items include both static items, those that cannot be changed, and dynamic items, items that can be changed. The instrument contains a greater number of dynamic items (30) compared to static items (14). The ten categories include: 1) Physical Health/Medical; 2) Vocational/Financial; 3) Education; 4) Family and Social Relationships; 5) Residence/Neighborhood; 6) Alcohol; 7) Drug Abuse; 8) Mental Health; 9) Attitude; and 10) Criminal

Behavior. Each category contains a different number of items. The number of items in each category is based on the strength of the relationship between the category and criminal behavior. Categories that have a stronger relationship, or are better predictors of criminal behavior, have more items. The number of items per category is presented in Table 2.1.

Table 2.1

Number of Items per Category, OST and FROST

OST/FROST Category	Number of Items
Physical Health/Medical	2
Vocational/Financial	5
Education	3
Family and Social Relationships	8
Residence and Neighborhood	2
Alcohol	3
Drug Abuse	3
Mental Health	2
Attitude	7
Criminal Behavior	9

The OST and FROST each provide a total risk score that can range from zero to 44. At the time of statewide implementation in 2005, statewide cutoff scores were established creating three different risk levels; low risk, medium risk, and high risk.

Table 2.2

Statewide OST and FROST Cutoff Scores

Risk Level	OST/FROST Scores
Low Risk	0 – 9
Medium Risk	10 – 17
High Risk	18 – 44

Category scores are also provided, based upon the percentage of items in the category scored as a risk factor, out of the total number of items in the category. For example, if a person scores a "1" on one of the two items in the Mental Health category, the category score for Mental Health would be 50%. Converting the raw score for each category into a percentage allows comparisons to be made across categories to determine which need areas are most significant for the probationer.

The total score on the OST or FROST, and the corresponding risk levels, are used by supervising probation officers to establish a supervision level. The supervision level guides decisions about how often the probationer needs to be seen and helps probation officers prioritize who to focus their attention on. The category scores in the OST and FROST are used to identify areas in need of treatment or intervention and help establish case plan goals and priorities.

It is the policy of the MCAPD to complete the OST on all individuals placed on supervised probation. In most instances the OST is completed as part of the presentence investigation process. Information to score the OST is gathered through a face-to-face interview with the defendant, from information gathered from collateral contacts (e.g. employer, family members) and through a review of official records (e.g. criminal history, police report). However, there are times when the OST is not completed at presentence. The Superior Court in Maricopa County has expedited courts in which the amount of time between plea and sentencing does not allow for a complete presentence investigation. In other cases the presentence report may be waived and the judge proceeds quickly to

sentencing. Finally, there are times when the defendant does not show for a presentence interview, resulting in insufficient information to complete the assessment. For situations such as these, the MCAPD has established a post-sentence Assessment and Referral Center (ARC). Individuals sentenced to supervised probation who did not have an OST completed at presentence are referred to ARC for an OST.

The OST and FROST are companion tools that contain the same number of items across the same categories. The only difference between the tools is the timeframe that is the focus of the assessment. The OST focuses on behavior at the time of the current offense to identify what was going on in the individual's life at the time he/she got in trouble. The FROST assesses the same areas but with a focus on the past six months. The presence of dynamic risk factors within the OST and FROST allow the instruments to be used to measure change in both the total risk score and within each category. The FROST is completed by the supervising field officer every six months.

Domestic Violence Screening Inventory (DVSI). The Maricopa County Adult Probation Department has also implemented the Domestic Violence Screening Inventory (DVSI). The DVSI was developed by the Colorado Department of Probation Services. It is a 12-item assessment tool that contains factors associated with intimate partner violence. It was initially used in Colorado as a screening instrument to help with expeditious case processing. It is a short tool that can be completed based upon a review of official documents such as

police reports and criminal history and does not require an interview with the offender (Williams & Houghton, 2004).

Each item within the DVSI has multiple response choices that range from either 0 to 2 or 0 to 3, depending upon the item. The scores from the 12 items are then combined into a total score that can range from 0 to 30. The higher the score, the higher the risk to reoffend. Initial cutoff scores were established by the Colorado Department of Probation Services. Scores below eight were considered low risk. Scores of eight or above were considered high risk.

Although the MCAPD had been using the OST and the FROST to assess the risk and needs of all probationers, there was a concern that these assessments did not assess all relevant risk factors for domestic violence offenders. An additional concern was whether or not the right individuals were being placed on the department's specialized domestic violence caseloads. After researching available tools for assessing risk of domestic violence offending, the decision was made to implement the DVSI with this population. Probation officers supervising specialized domestic violence caseloads and probation officers writing presentence reports were trained on the DVSI. The DVSI is completed on individuals coming through presentence who are charged with a domestic violence offense. Probationers may also be assessed with the DVSI by specialized domestic violence officers if domestic violence issues are identified while in the field, or when the individual is going through the probation violation process. The MCAPD began using the DVSI in March of 2006.

Probation Supervision and the Assignment Process

Once an individual has been sentenced to probation, the Maricopa County Adult Probation Department is responsible for assigning the case to a probation officer for supervision. There are two types of supervised probation available in Maricopa County, standard probation and Intensive Probation Supervision (IPS). The MCAPD has also implemented specialized caseloads for certain populations. One of those populations is domestic violence offenders.

Not all individuals on probation for a domestic violence offense will be assigned to a specialized domestic violence caseload. The DVSI was implemented to help guide decisions about who should be assigned to specialized domestic violence caseloads and receive specialized supervision. In order to use the DVSI as a decision-making tool, the MCAPD opted to use the DVSI norms established by the Colorado Department of Probation Services to determine which probationers were considered low risk, and appropriate for standard probation supervision, and which probationers were considered high risk, and appropriate for specialized domestic violence supervision. Individuals scoring below eight were to be assigned to standard probation caseloads while individuals scoring eight or above were to be assigned to specialized domestic violence caseloads.

Regardless of caseload assignment, domestic violence offenders are required to abide by the standard conditions of probation. They may also be required to abide by specialized domestic violence conditions of probation, if ordered by the judge. While the basic conditions of supervision are the same, there are some differences between the supervision received on a standard

caseload and that received on a specialized domestic violence caseload. Officers supervising specialized domestic violence caseloads are required to obtain specialized domestic violence training. The specialized caseloads also provide team supervision through the use of a probation officer and a surveillance officer. A primary responsibility of the surveillance officer is to conduct field contacts. While any field officer within the MCAPD has the option of becoming armed, surveillance officers for the domestic violence caseloads are required to be armed. The domestic violence officers are also very focused on victim safety and emphasize contact with the victims. Many domestic violence probationers also have treatment requirements as part of the conditions of probation. This may include domestic violence treatment, or other forms of treatment such as substance abuse.

Research Questions

The context of the current study provides the opportunity to answer a number of questions about the use of the OST/FROST and the DVSI with a population of domestic violence probationers. Prior to assessing the formal research questions and hypotheses, information will be gathered to assess the extent to which the DVSI has been implemented by the MCAPD as intended. The intent is to use the DVSI as a screening instrument to determine who should be supervised on the specialized domestic violence caseloads. Individuals scoring eight or above on the DVSI are to be assigned to the specialized caseloads. The expectation is that individuals scoring below that threshold will be assigned to a standard probation caseload.

Relationship Between the DVSI and the OST/FROST

The decision to implement the DVSI was based in part on a belief that domestic violence offenders represent a unique population of offenders that possess characteristics predictive of risk that are not currently represented in general risk and needs assessment tools, such as the OST and the FROST. Existing research on this topic has been mixed. Some studies suggest that the factors that predict recidivism for offenders in general are also predictive of domestic violence. Other studies have found that domestic violence risk assessment tools may be tapping into something unique that differs from predictors of violence in general. While both instruments are assessing risk it is hypothesized that each assessed risk in a different way that that the DVSI includes factors unique to the domestic violence population.

Hypothesis 1: The OST/FROST and the DVSI will be moderately correlated. There will be some variation in the OST that is not accounted for by the DVSI, and vice versa.

Predictive Validity of the DVSI and the OST/FROST

Evidence of the predictive validity of the DVSI has been established (Williams & Houghton, 2004) for arrests for domestic violence offending and for criminal offending in general. A previous validation of the OST and FROST (Lowenkamp et al., 2008) has found evidence of its ability to predict various outcomes. However, it is also important to establish the predictive validity of these assessments in the context of this study. This includes developing an understanding of how well the OST/FROST predicts outcomes with the domestic

violence population. Multiple outcome measures will be included in the study to address probation outcomes. The measures will assess probation outcomes in general and will also include measures that look at domestic violence behaviors. Based upon the results of previous validation studies, it is hypothesized that the DVSI and the OST/FROST will both be predictive of general and domestic violence specific probation outcomes.

Hypothesis 2: The DVSI will be predictive of general and domestic violence specific probation outcomes.

Hypothesis 3: The OST and the FROST will be predictive of general and domestic violence specific probation outcomes.

If the DVSI and the OST/FROST are predictive of general and domestic violence specific probation outcomes domestic violence specific outcomes in particular, decisions need to be made about which assessment to use, and whether one assessment is more predictive than the other. While it is anticipated that each assessment will be predictive, it is also expected that the DVSI is assessing something unique to the domestic violence population. As a result, it is hypothesized that the DVSI and the OST/FROST together will predict probation outcomes better than either assessment tool alone.

Hypothesis 4: The OST/FROST and DVSI together are better predictors of general probation and domestic violence specific outcomes than either assessment tool alone.

Significant Predictors of Probation Outcomes for Domestic Violence Offenders

In addition to looking at the predictive validity of the instruments, the study will also identify which individual factors are most predictive of probation outcomes. Study variables will include static and dynamic risk factors. In addition to the variables included in the assessments, other potential factors include demographics, criminal history, current offense and supervision variables. The value of dynamic risk factors is that they have the potential to be targets for treatment or intervention. Based upon this it is anticipated that dynamic risk factors, such as employment, substance abuse, attitudes and social relationships will be the strongest predictors of probation outcomes.

Hypothesis 5: Dynamic risk factors will be stronger predictors of probation success for domestic violence probationers than static factors.

Finally, the MCAPD policy of conducting assessments using the FROST every six months allows the opportunity to measure change in risk over time. Very few studies have incorporated measures that take into consideration changes in risk providing minimal evidence on the relationship between change in risk, or risk reduction, and probation outcomes. It is hypothesized that a decrease in risk scores will be predictive of probation outcomes.

Hypothesis 6: A decrease in risk score from the initial OST/FROST assessment to subsequent FROST assessments is predictive of probation outcomes.

The next chapter will describe the sample selection process, data collection methods, definitions of variables included in the study and the methods of statistical analysis that will be used.

Chapter 3

RESEARCH METHODS

The research questions will be addressed using data collected on a sample of probationers identified as domestic violence offenders by the Maricopa County Adult Probation Department.

Sample Selection

For the current study, individuals assessed with the DVSI at the time of initial sentence or placement on probation between March 30, 2006 and June 30, 2007 were identified. The start date for the study timeframe represents the start of implementation of the DVSI. The end date, June 30, 2007, represents the end of the fiscal year for the MCAPD. This was identified as a reasonable end date that would allow a sufficient number of cases to be identified for the study.

The DVSI exists as a form that probation staff complete as part of the presentence process when an individual is identified as a domestic violence offender. Typically, an individual is identified as a domestic violence offender based upon the charge being listed as a domestic violence offense. However, presentence staff will also administer the DVSI to an offender if the circumstances of the incident reflect a domestic violence situation, even if the offender pled to a non-domestic violence offense. Some DVSI assessments are also completed in the field if the supervising probation officer believes that the probationer should be supervised on the specialized domestic violence caseload.

The DVSI is not an automated assessment. When the DVSI is completed, a copy of the assessment is sent to the Planning and Research Division of the MCAPD. Copies of completed assessments were reviewed to identify only those that appeared to be assessed at the beginning of the probation grant. Those who were assessed with the DVSI more than 30 days after the start of the probation grant were excluded. This preliminary review resulted in a total of 796 assessments.

In most instances the DVSI was administered prior to sentencing as part of the presentence process. For individuals assessed at presentence, multiple sentencing outcomes can occur. These include:

1. A sentence of prison to be served in the Arizona Department of Corrections (ADC);
2. A sentence of prison on one offense, to be served in ADC, followed by a sentence of probation on another offense;
3. A sentence of supervised probation, which could include standard probation or intensive probation; or
4. A sentence of unsupervised probation.

In a few instances the DVSI was administered post-sentence, after the individual had been sentenced to supervised probation.

Upon reviewing the characteristics of each offender assessed with the DVSI, multiple reasons were identified for excluding individuals from the sample. The first is individuals who were not on probation for a domestic violence offense. The second is individuals who did not receive probation supervision.

The third relates to the initial assignment on probation. The final reason was the completeness of assessment information. The number of individuals excluded from analysis for each reason is presented in Table 3.1.

Table 3.1

Cases Excluded from Analysis

Reason excluded from analysis	Number of cases
Not on Probation for a Domestic Violence Offense	17
Not New to Probation Supervision	7
Not Assigned to Supervised Probation	
Terminal Disposition of ADC or ADC with probation tail and not yet released	52
Released to ICE and Deported	48
Supervised Out-of-County or Out-of-State	23
Dismissed or Diverted	2
Unsupervised Probation	4
Not Sentenced Yet	5
Not Long Enough Follow-up Period in Community	7
Not Assigned to Standard or DV Caseload	
Intensive Probation Supervision	24
Seriously Mentally Ill	8
Spanish-speaking	1
DUI Court	1
Minimum Assessed Risk Supervision	2
Sex Offender	1
Random Assignment	1
Missing Assessment Information	
Missing DVSI	**7**
Missing OST/FROST	13
TOTAL Excluded	223

Non-Domestic Violence Offenders or Not New to Probation

Upon reviewing the presentence reports for the current offense it was discovered that a number of individuals were either not currently on probation for a domestic violence offense, or had already been on probation at the time they committed the domestic violence offense. Those who did not have a current domestic violence offense had been screened with the DVSI because of a history of domestic violence. As the purpose of the study was to look at the use of risk assessment tools with individuals currently on probation for a domestic violence offense, these 17 individuals were excluded from the analysis. There were seven individuals who were already on probation supervision. As the purpose of the study was to look at individuals from the start of probation supervision, these individuals were also excluded from the analysis.

Supervised Probation

Since the intent of the study is to look at the use of assessment tools in the context of probation supervision, individuals that did not receive supervised probation were also excluded from analysis. This included the following groups of individuals: 1) individuals that received a terminal disposition of ADC; 2) individuals sentenced to ADC who had not been released to probation yet; 3) individuals released to Immigration and Customs Enforcement (ICE) and deported within 30 days of sentencing; 4) individuals given permission to move out of county or out of state; 5) individuals whose cases were dismissed or diverted; 6) individuals sentenced to unsupervised probation; and 7) individuals who had not been sentenced yet.

The amount of time on supervision in the community was also taken into consideration. Many individuals spend some time in jail as an initial condition of probation. For purposes of the study, only individuals who spent at least one year on probation supervision in the community were included. This resulted in an additional seven individuals being excluded. A total of 141 individuals were excluded based upon these criteria.

Caseload Assignment

For those sentenced to probation, the initial caseload assignment was identified. The primary reason for implementing the DVSI was to identify individuals most in need of supervision on specialized domestic violence caseloads. There were 243 individuals with an initial assignment to a specialized domestic violence caseload.

Of the remaining individuals that were not assigned to the specialized domestic violence caseload, the majority (n= 330), were assigned to standard probation caseloads. Individuals that were not assigned to standard probation caseloads were assigned to either IPS, or other types of specialized caseloads such as Spanish-speaking, Seriously Mentally Ill, DUI Court, Sex Offender, or Minimum Assessed Risk Supervision. One case was a random assignment and was not actually a domestic violence offender. Due to the small numbers of probationers assigned to non-standard probation caseloads, those initially assigned to IPS and other specialized caseloads were excluded from the analysis.

Missing Assessment Information

As this is a study of risk assessment instruments used with domestic violence offenders, it is essential that information on those assessment instruments is available. The final criterion used to exclude individuals from the sample was the availability of assessment information on both the DVSI and the OST/FROST. Each item on the DVSI has an option for unknown. The assessment can be scored even when there is unknown of missing information. Instead of relying on the total score, a percentage is calculated that takes into account how many items were unknown and the number of possible points accounted for by the missing items. The number of missing points is subtracted from the total number of points, creating a new points possible total.

For example, if a DVSI has two unknown items that account for four points, four would be subtracted from 30, the total number of points possible on the DVSI, to create a new total of 26. The number of points actually scored on the assessment would be divided by the new total to identify a percentage score. The percentage score can then be used to determine if a person is low or high risk. High risk individuals are those with a percentage score of 26.7% or greater as this is the percentage that corresponds to a DVSI score of eight. However, even though there is an adjustment to account for missing information, there are concerns about making decisions based on too much unknown information. A decision was made to exclude cases where at least half of the information was unavailable to score the assessment. Cases where responses to more than six items were

unknown or where the total point missing was more than 15 were excluded. This results in the elimination of seven individuals.

The extent of missing information on the OST/FROST was also reviewed. Each OST/FROST conducted is designated as valid or invalid based on the amount of missing information. An OST or FROST is invalid if more than six items are not scored. Only valid assessments were selected for inclusion in the data. Once all available assessments had been identified, there were 13 individuals that did not have an OST or a FROST completed. These individuals were removed from the sample. The final sample includes 573 probationers convicted of domestic violence offenses.

Data Collection

As described above, the initial sample for the study was identified through the paper copies of the DVSI assessment sent to the Planning & Research Division of the MCAPD. Each probationer was then looked up in APETS (Adult Probation Enterprise Tracking System), the management information system used by the MCAPD to maintain case management information, to identify the APETS ID. The APETS ID represents a unique identifier assigned to each probationer. Once the APETS ID was identified for each individual in the sample, additional data were extracted from APETS using Crystal Reports. The additional data included demographics (gender, ethnicity, date of birth, marital status), current offense information, criminal history, OST and FROST assessments, petitions to revoke, and probation outcome.

Additional variables were identified as necessary for the study that are not maintained in APETS. These include victim characteristics such as the age and gender of the victim and the relationship between the offender and the victim. It also includes the reasons why a petition to revoke was filed. The victim information can be obtained from the description of the current offense found in the presentence report. Detailed information about the reasons for a petition to revoke can be found in the actual petition, or the probation violation report. Presentence reports, petitions to revoke and probation violations reports are all maintained electronically in iCIS (Integrated Court Information System). The presentence report, petitions to revoke and probation violation reports for each individual in the sample were looked up in iCIS and relevant information was coded for analysis. While the data extraction and compilation of the data for this study was completed by the author, the data were initially collected by probation staff in the course of their daily work activities and entered into the various electronic databases used by the Maricopa County Adult Probation Department.

Variables

Decisions about what variables to include in the study were based on multiple factors. One is the literature on risk assessment that has identified factors associated with reoffending in general and for domestic violence offending specifically. Practical consideration was also given to the availability of existing data, either through APETS or other electronic systems to minimize the impact of this study on supervising probation officers. The result is a set of variables that

include demographics, criminal history, current offense, risk/needs assessment information, as well as aspects of supervision.

Independent Variables

Initial Caseload Assignment. The assignment of an individual to a probation officer is the decision of the MCAPD. Individuals in the sample were assigned to either a standard probation caseload (n=330) or a specialized domestic violence caseload (n=243). As the DVSI was used to identify individuals believed to be more appropriate for specialized domestic violence supervision, descriptive information about the sample will be provided for the overall sample, as well as by initial caseload assignment.

Demographics. Information on basic demographic characteristics of the sample was obtained. This includes the probationer's gender, ethnicity, age at the time of sentence, and marital status. Demographic characteristics of the sample are presented in Table 3.2.

Gender. The sample included both male and female offenders. The majority of the probationers in the sample were male, 85%, while only 15% were female. The distribution of males and females varied by initial caseload assignment. The specialized domestic violence caseload had a greater percentage of males, 91.4%, compared to the standard probation caseloads, which were comprised of 80.3% males. The distribution of offenders across caseloads, by gender, was statistically significant ($\chi^2 = 13.408$, $p<.000$).

Race/Ethnicity. APETS captures race/ethnicity within a single field in the database. Approximately half of the sample was White, 45.5%, and a third

Table 3.2

Sample Characteristics: Demographic and Criminal History Variables

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
Demographics	%	%	%
Gender			
Male	85.0	91.4	80.3***
Race/Ethnicity			
White	45.5	45.3	45.8
Hispanic	34.4	33.7	34.8
Other	20.1	21.0	19.4
Marital Status			
Single	47.5	46.5	48.2*
Married	24.6	20.2	27.9
Separated/ divorced	21.8	27.2	17.9
Other	6.1	6.2	6.1
Average age at time of sentence - mean	32.6	33.5	31.9
Criminal history	%	%	%
<17 @ first arrest	34.2	44.9	26.4***
Three or more prior juvenile adjudications or adult convictions	38.6	62.1	21.2***
Prior felony offense	20.1	30.0	12.7***
Prior probation/parole revocations	11.0	16.9	6.7***
Prior violent convictions	32.1	55.1	15.2***

*p<.05. **p<.01. ***p<.001

Hispanic, 34.4%. The remaining 20.2% of the offenders were categorized as Other, which includes, Black, Asian, Native American, and other. The distribution did not vary significantly by initial caseload assignment.

Marital Status. Approximately half of the sample was single, 47.5%, with 24.6% married and 21.8% separated or divorced. Marital status did vary significantly by caseload assignment. Those initially assigned to standard probation caseloads were significantly more likely to be married and less likely to be separated or divorced (χ^2=8.997, p=.029).

Age. The average age of the overall sample was 32.6. The average age did not vary significantly by initial caseload assignment.

Criminal History. As part of the presentence investigation process, a detailed criminal history is obtained that contains information about prior convictions and prior involvement in the criminal justice system. This information is also used to score the criminal behavior category of the OST/FROST. Five dichotomous criminal history variables reflect the probationer's prior involvement in the criminal justice system. Characteristics of the criminal history variables are presented in Table 3.2.

Less than 17 years old at time of first arrest. Approximately one-third, 34.2%, of the sample was less than 17 years old at the time of the first arrest. A significantly higher percentage of individuals initially assigned to the specialized domestic violence caseloads were less then 17 years old at the time of first arrest compared with those initially assigned to standard probation caseloads, 44.9% vs. 26.4% respectively (χ^2=21.265, p < .000).

Three or more prior juvenile adjudications or adult convictions. Over one-third of the sample, 38.6%, had three or more prior juvenile adjudications or adult convictions. The specialized domestic violence caseloads had a significantly higher percentage of individuals with three or more prior juvenile adjudications or adult convictions, 62.1%, then the standard probation caseloads, 21.2% (χ^2=98.941, p<.000).

Prior felony offense. One-fifth of the overall sample, 20.1%, had a prior conviction for a felony offense. This varied by initial caseload assignment. Almost one-third, 30.0%, of those initially assigned to the specialized domestic violence caseloads had a prior conviction for a felony offense compared to 12.7% of those initially assigned to standard probation caseloads (χ^2=26.152, p<.000).

Prior probation or parole revocations. Only 11.0% of the overall sample had a prior term of probation or parole revoked. However, this varied significantly by initial caseload assignment. Of those initially assigned to specialized domestic violence caseloads, 16.9% had a prior probation or parole revocation while only 6.7% of those initially assigned to standard probation caseloads had a prior probation or parole revocation (χ^2=14.895, p<.000).

Prior violent convictions. One-third of the overall sample, 32.1%, had a prior violent conviction. A significantly higher percentage of those initially assigned to the specialized domestic violence caseloads had a prior violent conviction, 55.1%, compared to those initially assigned to standard probation caseloads, 15.2% (χ^2=102.675, p<.000).

Current Offense. A number of variables were collected related to the current offense. In Arizona, individuals may be placed on supervised probation for felony domestic violence offenses or for misdemeanor domestic violence offenses if there is a prior domestic violence conviction within the past 60 months. Therefore, the offense designation, felony or misdemeanor was captured. Other variables related to the current offense include whether the individual was convicted of multiple charges, if the individual had charges in addition to the domestic violence offenses, and if the individual was under the influence of alcohol or other drugs at the time of the offense. Data was also captured on whether or not the individual spent any time in custody, either prison or jail, prior to being supervised on probation in the community and the number of days spent in custody. Characteristics of the current offense variables are presented in Table 3.3.

Felony offense. The majority of individuals in the overall sample are on probation for a felony offense, 72.1%. A significantly higher percentage of those initially assigned to the specialized domestic violence caseloads are on probation for a felony offense, 79.4%, compared to those initially assigned to standard probation caseloads, 66.7% (χ^2=11.311, p=.001).

Multiple offenses. Approximately one-third of the overall sample, 32.6%, is on probation supervision for more than one offense. This did not vary significantly by initial caseload assignment.

Table 3.3

Sample Characteristics: Current Offense and Victim Characteristics

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
Current offense	%	%	%
Felony offense	72.1	79.4	66.7***
Multiple offenses	32.6	31.3	33.6
DV offenses only	84.6	84.4	84.8
Under influence of drugs/alcohol at time of current offense	30.7	28.0	32.7
Initial jail or prison	16.1	21.8	11.8***
Average days in custody - mean	20.6	27.5	15.6*
Victim characteristics	(N=565)	(N=239)	(N=326)
	%	%	%
Multiple victims	15.0	12.6	16.9
Female victim	83.0	87.9	79.4**
Male victim	24.2	19.7	27.6*
Adult victim	87.8	93.3	83.7***
Juvenile victim	18.1	10.9	23.3***
Victim relationship	%	%	%
Intimate partner	74.5	80.3	70.2**
Immediate family member	27.1	20.1	32.2***
Extended family member	1.6	1.7	1.5
Non-family relationship	8.7	7.5	9.5
Victim and offender live together at time of offense	51.5	36.0	62.9***

*p<.05. **p<.01. ***p<.001

DV offenses only. The majority of individuals in the overall sample are on probation for domestic violence offenses only, 84.6%. For those that are on probation for other types of offenses, the most common offenses are drug offenses, property offenses and DUI. This did not vary significantly by initial caseload assignment.

Under influence of drugs or alcohol at the time of the offense. Approximately one-third, 30.7%, of the overall sample was under the influence of alcohol or other drugs at the time of the current offense. Similar percentages were found among those initially assigned to the specialized domestic violence caseloads, 28.0%, and those assigned to standard probation caseloads, 32.7%. The difference was not significant.

Initial jail or prison. A small percentage of the overall sample, 16.1%, spent time in custody, in jail or prison, prior to being released to the community for probation supervision. A higher percentage of individuals initially assigned to the specialized domestic violence caseloads spent initial time in custody, 21.8%, compared to those initially assigned to standard probation, 11.8%. The difference is statistically significant (χ^2=10.368, p=.001). The average number of days in custody for the overall sample was 20.6 days. The average number of days in custody varied by initial caseload assignment. Those initially assigned to the specialized domestic violence caseload spent an average of 27.5 days in custody while the average number of days in custody for individuals initially assigned to standard probation is 15.6 days.

Victim Characteristics. A number of variables identifying characteristics of the victims of the domestic violence offenders were captured. These include the gender of the victim, the age of the victim and whether or not there were multiple victims. In addition, the relationship between the offender and the victim is important for identifying an offense as a domestic violence offense. In addition to spouses or other intimate partners, A.R.S. 13-3601.A.4 identifies an offense as domestic violence if "The victim is related to the defendant or the defendant's spouse by blood or court order as a parent, grandparent, child, grandchild, brother or sister or by marriage as a parent-in-law, grandparent-in-law, stepparent, step-grandparent, stepchild, step-grandchild, brother-in-law, or sister-in-law." The broad nature of this definition makes it necessary for a variable that captures the relationship between the victim and the offender. Finally, a variable was collected reflecting whether the victim and offender were living together at the time of the offense. The victim characteristics were captured from a review of the presentence report. Presentence reports could not be located for eight individuals in the sample. As a result, n=565 for the variables describing characteristics of the victims. Victim characteristics of the sample are presented in Table 3.3.

Multiple victims. Within the overall sample, 15% of the probationers had multiple victims. The percentage of offenders with multiple victims did not vary significantly by initial caseload assignment.

Gender of victims. The gender of all victims was captured and the sample reflects both male and female victims. The majority of offenders in the sample

had female victims, 83.0%. Males were victims in 24.2% of the cases. The gender of the victim varied by initial caseload assignment. A greater percentage of offenders initially assigned to the specialized domestic violence caseloads had female victims, 87.9%, compared to those initially assigned to the standard probation caseloads, 79.4% (χ^2=6.929, p<.01). A greater proportion of offenders with male victims were initially assigned to standard probation caseloads, 27.6%, compared to those initially assigned to the specialized domestic violence caseloads, 19.7% (χ2=4.736, p<.05).

Victim age. Due to the broad nature of the definition of domestic violence in Arizona, the victims of the sample of domestic violence offenders included both adult and juvenile victims. There were adult victims in 87.8% of the cases and juvenile victims in 18.1% of the cases. This varied significantly by initial caseload assignment. There was a greater percentage of individuals with adult victims initially assigned to the specialized domestic violence caseloads, 93.3%, compared to those initially assigned to the standard probation caseloads, 83.7% (χ2=11.763, p<.001). A greater percentage of individuals with juvenile victims were initially assigned to standard probation caseloads, 23.3%, compared to those initially assigned to domestic violence caseloads, 10.9% (χ2=14.412, p<.001).

Victim relationship. The broad definition of domestic violence also resulted in a variety of relationships between victim and offender. In the majority of cases, 74.5%, the victim and offender were intimate partners, current or former, married or unmarried. Approximately one-fourth, 27.1%, involved victims that were immediate family members, such as parents, children, or siblings. A very

small percentage, 1.6%, involved extended family members as victims, such as aunts, uncles, nieces. Finally, 8.4% of the cases involved victims that were outside of a family relationship. These cases included roommates and others who often tried to intervene in the domestic violence situation, such as neighbors or the police. Victim relationships varied by initial caseload assignment. The specialized domestic violence caseloads had a higher percentage of intimate partner victims, 80.3%, compared to the standard probation caseloads, 70.2% ($\chi 2=7.392$, $p<.01$). The standard probation caseloads had a higher percentage of victims that were immediate family members, 32.2%, compared to the specialized domestic violence caseloads, 20.1% (($\chi 2=10.267$, $p<.001$).

Victim and offender live together at time of offense. It could not be determined from the presentence report if the victim and offender lived together for 50 cases. For the remaining 515, the victim and offender were living together at the time of offense about half the time, 51.5%. This varied significantly by initial caseload assignment. Just over one-third, 36.0% of the offenders assigned to the specialized domestic violence caseloads were living with the victim at the time of the offense. Almost twice as many, 62.9%, of the individuals assigned to the standard probation caseloads were living with the victim at the time of the offense ($\chi 2=41.491$, $p<.001$).

Supervision. A number of variables were captured that provide some information about the supervision the individual received while on probation. While each individual in the sample was initially assigned to either a specialized domestic violence caseload or a standard probation caseload, they did not

necessarily remain on that type of caseload throughout the entire term of probation. A variable was created to capture change in supervision. The total number of days spent on the initial assignment was also captured. Characteristics of the sample on the supervision variables are presented in Table 3.4.

Table 3.4

Sample Characteristics: Supervision and Contacts

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
Supervision	%	%	%
Change in caseload assignment			
Decrease in supervision	9.9	13.6	7.3*
Stayed same	70.9	71.2	70.6
Increase in supervision	19.2	15.2	22.1
Average days on initial assignment – mean	550.3	550.4	550.2
Average # contacts (Mean)			
Total	38.0	50.4	31.2***
Face to face	33.3	45.1	26.4***
Victim	2.4	4.	1.0***
Average contacts per month	1.6	2.1	1.3***

*p<.05. **p<.01. ***p<.001

Change in caseload assignment. Over the course of a term of probation, an individual may be assigned to a number of different probation officers. In some instances the change does not reflect a change in the type of supervision, but merely a change in officers. In these instances, the type of supervision remains the same. In other instances an individual may be performing well on supervision

and a change is made that reflects a decrease in the amount of supervision. Examples of this include individuals initially assigned to specialized caseloads, such as domestic violence caseloads, who are transferred to standard probation or individuals on standard probation who are transferred to either Minimum Assessed Risk Supervision (MARS) or unsupervised probation. Increases in supervision may also occur. Examples of this include individuals on standard probation who are transferred to a specialized probation caseload or individuals who are transferred to Intensive Probation Supervision (IPS). Overall, the majority of individuals in the sample remained on the same type of supervision over the term of probation, 70.9%. Approximately ten percent of the sample, 9.9%, had a decrease in supervision, while approximately 20%, 19.2% had an increase in supervision. The change in caseload assignment varied significantly by initial caseload assignment. A higher percentage of individuals initially assigned to standard probation caseloads, 22.1%, had an increase in supervision compared to those initially assigned to specialized domestic violence caseloads, 15.2% (χ^2=9.070, p<.05).

Average number of days on initial caseload assignment. The average number of days spent on the initial caseload assignment, whether it was standard probation or a specialized domestic violence caseload was 550.4 days, or approximately 14 months. The number of days ranged from 35 to 1,690. The average number of days on the initial caseload assignment did not vary by initial caseload assignment.

Contacts. The number of required contacts varies based upon the supervision level of the probationer. The contact standards established by the Arizona Code of Judicial Administration identify minimum contact standards, which dictate how frequently a probation officer must see the probationers on their caseload. Officers also have the discretion to see their probationers more frequently if necessary. Each contact related to the probationer is recorded in APETS. Variables were created to capture the total number of contacts with the client over the course of supervision, the total number of face-to-face contacts with the client and the average number of contacts per month of supervision. In addition to client contacts, the number of victim contacts is also captured as there is at least one victim in each of the domestic violence cases. Contact information for the sample is provided in Table 3.4.

Client contacts. The contact variables only included instances where contact was actually made with the client. Attempts to contact the client were not counted. Overall, each probationer had an average of 38 contacts over the course of supervision, which included both face-to-face and telephone contacts. This is an average of 1.6 contacts per month. This is consistent with the contact standards required by the Maricopa County Adult Probation Department. Individuals assessed as medium risk, which includes 77% of the overall sample, should be seen at least once per month. The average number of face-to-face contacts was 33.3. The number of contacts varied by initial caseload assignment. Those initially assigned to the specialized domestic violence caseloads had significantly more contacts averaging 50.4 total contacts, which included 45.1

face-to-face contacts for an average of 4.5 contacts per month. Individuals initially assigned to standard probation caseloads averaged 31.2 total contacts, with 26.4 face-to-face contacts for an average of one contact per month.

Victim contacts. Contacts with the victim are also recorded in APETS. Only actual contacts were counted, not attempts to contact the victim. Overall, there were 1.6 victim contacts for each case. This varied by initial caseload assignment with more victim contacts occurring in cases that were initially assigned to the specialized domestic violence caseloads. There was an average of 2.1 victim contacts for these cases compared with 1.3 victim contacts for those initially assigned to standard probation caseloads.

Domestic Violence Screening Inventory (DVSI) assessment. A number of variables are captured from the DVSI including the total DVSI score and the assessed risk level. The assessed risk level is captured two different ways. The first is by the total score. DVSI scores of seven or below are considered low risk. DVSI scores of eight or above are considered high risk. The assessed risk level is also determined based on the calculated percentage, which takes into account missing or unknown information from the individual items on the DVSI. A percentage score of 26.6% or below is considered low risk. A percentage score of 26.7% or above is considered high risk, which is the percentage equivalent to a DVSI score of eight. Descriptive information about the DVSI score and risk categories is presented in Table 3.5. Scores for each individual item in the DVSI are also captured. Upon review of the frequencies for each DVSI item, each individual item was recoded into a dichotomous variable indicating either the

presence or the absence of the risk factor. Characteristics of the sample on the individual DVSI items are presented in Table 3.6.

DVSI Score. The DVSI scores in the overall sample ranged from zero to 25. The average DVSI score for the overall sample is 7.5. The average DVSI score varied significantly by initial caseload assignment. The average DVSI score for those initially assigned to the specialized domestic violence caseloads was 11.0. The average score for those initially assigned to standard probation caseloads was 5.0.

Table 3.5

Sample Characteristics: DVSI Assessment Scores

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
DVSI assessment	%	%	%
Risk level (by score)			
High risk	45.2	90.1	12.1***
Risk level (by %)			
High risk	47.3	92.2	14.2***
Average DVSI score – mean	7.53	11.0	5.0***

*p<.05. **p<.01. ***p<.001

DVSI Risk Categories. Cutoff scores are used with the DVSI to help determine low risk and high risk cases. The decision rule created by the Maricopa County Adult Probation Department was that individuals scoring eight or above

would be assigned to the specialized domestic violence caseloads. Just under half, 45.2%, of the overall sample was assessed as high risk. The distribution of cases based on the DVSI risk category varied by initial caseload assignment as expected. Using the risk categories created by the total DVSI score, the majority of individuals initially assigned to the specialized domestic violence caseloads were assessed as high risk on the DVSI, 90.1%, compared to 12.1% of those initially assigned to standard probation caseloads (χ^2=343.763, p<.001). . Similar results were found using the risk categories created by the calculated percentage with 92.2% of the individuals assigned to the specialized domestic violence caseloads assessed as high risk and only 14.2% of those assigned to standard probation caseloads assessed as high risk (χ^2=341.039, p<.001).

Overall, the distribution of cases by DVSI score demonstrates that the Maricopa County Adult Probation Department is using the DVSI to guide the decisions about initial caseload assignment. There were 259 offenders that scored eight or above on the DVSI. Of those 259, 219, or 84.6%, were assigned to the specialized domestic violence caseloads. Of the 314 offenders that scored seven or below on the DVSI, 290, or 92.4%, were initially assigned to standard probation caseloads.

DVSI individual items. For each individual item on the DVSI there were some cases where the information to score the item was unknown. The amount of missing information ranged from two cases for Item 1, prior non-domestic violence convictions to 41 for Item 3, prior domestic violence treatment. For ten

Table 3.6

Sample Characteristics: DVSI Assessment Individual Items

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
DVSI Individual Items			
Prior non-DV convictions-yes (n=571)	43.1	63.4	28.2***
Prior arrests for assault, menacing, harassing-yes (n=566)	51.8	73.3	36.1***
Prior DV treatment-yes (n=532)	11.9	21.4	4.8***
Prior drug or alcohol treatment -yes (n=546)	25.8	35.4	18.8***
History of orders of protection – yes (538)	35.6	61.3	16.7***
History of violating orders of protection –yes (n=546)	26.9	51.9	8.5***
Object used as weapon in commission of crime – yes (n=563)	37.9	38.3	37.6
Children present during the DV incident –yes (n=553)	50.4	53.9	47.9
Current employment status – unemployed (n=558)	39.6	51.0	31.2***
Victim separated from offender in past six months –yes (n=541)	50.4	58.8	44.2***
Victim had restraining order at time of offense – yes (n=566)	23.9	47.3	6.7***
Offender on community supervision at time of offense – yes (n=566)	13.3	26.3	3.6***

*p<.05. **p<.01. ***p<.001

of the individual items, there were significant differences between those initially assigned to the specialized domestic violence caseloads and those initially assigned to standard probation caseloads. A higher percentage of individuals assigned to specialized domestic violence caseloads had prior non-domestic violence convictions, had prior arrests for assault, menacing or harassing, had attended prior domestic violence treatment, had attended prior drug or alcohol treatment, had a history or orders of protection, had a history or violating orders of protection, were unemployed, had separated from the victim in the last six months, had a current restraining order and were under some type of community supervision at the time of the offense. The two items that did not differ significantly between those initially assigned to the specialized domestic violence caseloads and those assigned to standard probation caseloads were weapon used in the commission of the offense and children present during the domestic violence incident.

Initial OST/FROST Assessment. The OST and FROST are the general risk and needs assessment tools used by the Maricopa County Adult Probation Department. The total score for the initial assessment conducted for each probationer is captured. Although the MCAPD currently does not separate the total risk score into separate static and dynamic scores, the OST and FROST contain both static and dynamic risk factors which allow them to be used to measure change in risk over time. A static and dynamic score can be created through a review of the individual items in the assessment. A static total is created which represents the number of risk factors the individual has that are

considered static. These are items that cannot be changed and reflect a risk threshold for the individual that they cannot fall below. A dynamic total is also created to represent the number of risk factors the individual has that are changeable. This is the portion of the total risk score that is targeted through treatment and intervention. These variables are presented in Table 3.7.

Variables are also created for the assessed risk level of the OST/FROST. Two different variables are created using two different sets of cutoff scores. The first set of assessed risk categories is based on the cutoff scores in effect in 2006 at the time the individuals in the sample received their initial assessment. These cutoff scores create three risk categories: low, medium, and high. The second set of assessed risk categories is based on cutoff scores developed following a statewide validation study of the OST/FROST in 2009. The revised cutoff scores created four risk categories: low, medium-low, medium-high and high. Separate cutoff scores were also created for males and females as well. These variables are presented in Table 3.7.

The category score, which is the combined score of all of the items in the category, for each of the ten categories in the OST/FROST, are also captured. These variables are presented in Table 3.8.

Initial OST/FROST score. The average score for the overall sample on the initial OST/FROST is 10.7. The average score varied by initial caseload assignment. The average score for those initially assigned to the specialized domestic violence caseloads was 11.8. This is significantly higher than the average score of 9.9 for those initially assigned to standard probation caseloads.

The average score on the static items and the average score on the dynamic items of the initial assessment also varied by initial caseload assignment. The average static score for the overall sample was 3.0. For those initially assigned to specialized domestic caseloads it was 3.6, compared to 2.6 for those initially

Table 3.7

Sample Characteristics: Initial OST/FROST Assessment Scores

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
Initial assessment (OST/FROST)	%	%	%
Risk level (2006 cutoff scores)			
Low risk	19.2	11.1	25.2***
Medium risk	77.1	84.0	72.1
High risk	3.7	4.9	2.7
Risk level (2009 cutoff scores)			
Low risk	14.3	6.6	20.0***
Medium-low risk	40.3	34.7	45.2
Medium-high risk	38.4	50.2	29.7
High risk	7.0	9.5	5.2
Average initial assessment score – mean	10.7	11.8	9.9***
Average static score – mean	3.0	3.6	2.6***
Average dynamic score – mean	7.7	8.2	7.3***

*p<.05. **p<.01. ***p<.001

assigned to standard probation. The average dynamic score for the overall sample was 7.7. For those initially assigned to specialized domestic violence caseloads it was 8.2, compared to 7.3 for those initially assigned to standard probation.

OST/FROST risk categories. Cutoff scores are used with the OST/FROST to place people into risk categories. Using the cutoff scores that were in effect in 2006, when the sample of probationers was initially assessed, the majority 77.1% were assessed as medium risk, with 19.2% assessed as low risk and only 3.7% assessed as high risk. The assessed risk level varied by initial caseload assignment. The specialized domestic violence caseloads had a higher percentage of cases assessed as medium and high risk compared to the standard probation caseloads. The specialized domestic violence caseloads had a total of 88.9% assessed as either medium or high risk while the standard probation caseloads only had 74.8% assessed as either medium or high risk (χ^2=18.776, p<.001). A similar pattern was found using the cutoff scores that went into effect in 2009 following a statewide validation study of the OST/FROST. Overall, 45.4% of the sample was assessed as either medium-high or high risk. The specialized domestic violence caseloads had 59.7% assessed as either medium-high or high risk while only 34.9% of those initially assigned to standard probation caseloads were assessed as medium-high or high risk (χ^2=41.179, p<.001).

OST/FROST category scores. The average category score for each category in the OST/FROST was captured. The total number of points in each category varies from two to nine. The average category score varied significantly

between those initially assigned to specialized domestic violence caseloads and those initially assigned to standard probation for the categories of Physical Health/Medical, Vocational/Financial, Family and Social Relationships, Drug Abuse and Criminal Behavior.

Table 3.8

Sample Characteristics: Initial OST/FROST Category Scores

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
OST/FROST categories	Mean	Mean	Mean
Physical health/medical (0-2)	.11	.15	.08 *
Vocational/financial (0-5)	1.1	1.3	1.00 *
Education (0-3)	.56	.61	.53
Family & social relationships (0-8)	1.9	2.1	1.80 *
Residence & neighborhood (0-2)	.27	.32	.24
Alcohol (0-3)	.48	.50	.47
Drug abuse (0-3)	.82	.94	.73 *
Mental health (0-2)	.47	.46	.48
Attitude (0-7)	2.2	2.3	2.1
Criminal behavior (0-9)	2.7	3.2	2.4 ***

Note. Values in parentheses indicate the range of scores for the category.
*p<.05. **p<.01. ***p<.001.

Change in assessment scores. The inclusion of dynamic factors within the OST/FROST makes it possible to use the assessment to measure change in risk. It is the policy of the Maricopa County Adult Probation Department to reassess probationers with the FROST every six months over the course of

probation supervision. Variables are created to capture the change in risk that occurs. These variables are presented in Table 3.9.

Within the overall sample there are 446 individuals that had at least two assessments, allowing change in OST/FROST scores to be captured. The average score on the second assessment conducted was 8.2. The average amount of change from the initial assessment to the second assessment was 2.2. The majority of individuals experienced a decrease in the OST/FROST score from the initial assessment to the second assessment, 78.0%. Similar results were found when comparing the initial assessment to the last assessment. Of the 446 individuals with multiple assessments, 323 had more than two assessments. The average score of the last assessment conducted was 8.3 with an average amount of change of 2.1 points. Overall, 78% of the individuals experienced a decrease in score from the first assessment conducted to the last assessment conducted. The average assessment scores on the second assessment and the last assessment varied by initial caseload assignment. For those initially assigned to specialized domestic violence caseloads the average score on the second assessment was 8.9 and the average score on the last assessment was 9.1, compared to an average score of 7.7 for both assessments for those initially assigned to standard probation caseloads. There was no difference in the amount of change or in the percentage of individuals that experienced a decrease in assessment scores.

Table 3.9

Sample Characteristics: Change in OST/FROST Scores

Variable	Overall sample (N=446)	Initial assignment to DV caseload (N=182)	Initial assignment to standard probation caseload (N=330)
Change in OST/FROST scores	%	%	%
Initial assessment to 2nd assessment			
Decrease in Score	70.9	70.9	70.8
Average score 2nd assessment	8.2	8.9	7.7***
Average change in score	2.2	2.5	2.1
Initial assessment to last assessment	%	%	%
Decrease in score	70.2	67.6	72.0
Average score last assessment	8.3	9.1	7.7***
Average change in score	2.1	2.3	2.0

*p<.05. **p<.01. ***p<.001.

Dependent Variables

The dependent variables reflect recidivism, or the probation outcomes. In this study, multiple measures will be used to reflect outcomes. The characteristics of the sample on the dependent variables are provided in Table 3.10.

Petition to Revoke. A petition to revoke (PTR) is a tool available to probation officers and is used to let the Court know that the probationer has not been compliant with the conditions of probation. The MCAPD has a "Violation of Probation" policy that provides guidelines on when a PTR is to be filed. For

Table 3.10

Sample Characteristics: Outcomes

Variable	Overall sample (N=573)	Initial assignment to DV caseload (N=243)	Initial assignment to standard probation caseload (N=330)
Outcomes	%	%	%
Petitions To Revoke (PTR)			
PTR filed	50.4	64.2	40.3***
PTR-technical violations only	24.3	35.8	15.8***
PTR-new crime	26.2	28.4	24.5
PTR-DV conditions	40.1	54.3	29.7***
PTR-victim contact	18.5	26.7	12.4***
PTR- new DV offense	11.9	13.2	10.1
Unsuccessful probation status	34.2	45.7	25.8***

*p<.05. **p<.01. ***p<.001.

some violation behaviors a PTR is required to be filed. However, depending on the nature of the violation behavior, probation officers also have other options available to them to address the violation behavior before formally notifying the court through a PTR. There are multiple reasons for filing a PTR. In some instances the PTR is filed because the probationer has engaged in new criminal behavior. In other instances, the PTR may be filed for technical violations of the conditions of probation, and in some situations the probationer has committed both a new crime and technical violations.

Petitions to revoke are looked at in multiple ways through this study. A dichotomous variable has been created to indicate whether a PTR was filed or no.

The reasons for filing a PTR are also incorporated into outcome variables. One variable indicates if the PTR was filed for technical violations only. A second variable indicates if a PTR was filed for a new crime. Very few PTRs are filed for new criminal behavior only. As a result, those with PTRs for new crimes may also have had technical violations.

Finally, because this is a study of domestic violence probationers, outcome variables are created to look at violation behavior specific to domestic violence. The first variable addresses whether there are any violations alleged for DV conditions (e.g. victim contact, failure to participate in domestic violence counseling). Due to the central role of victims in domestic violence cases, victim contact is looked at as a separate outcome as well. Finally, there is a variable that addresses whether a PTR was filed alleging a new domestic violence offense.

PTR filed. Approximately half of the overall sample, 50.4%, had a PTR filed. This varied by initial caseload assignment. A higher percentage of individuals initially assigned to specialized domestic violence caseloads had a PTR filed, 64.2%, compared to those initially assigned to standard probation caseloads, 40.3% (χ^2=31.964, p<.001).

PTR technical violations only. Of the overall sample, 24.3% had a PTR filed for technical violations of probation only. This varied by initial caseload assignment. A higher percentage of individuals initially assigned to specialized domestic violence caseloads had a PTR filed for technical violations only, 35.8%, compared to those initially assigned to standard probation caseloads, 15.8% (χ^2=30.604, p<.001).

PTR new crime. Just over one-quarter of the sample, 26.2% had a PTR filed for a new crime. This did not vary significantly by initial caseload assignment.

PTR DV conditions. Violations of the domestic violence conditions of probation were alleged in the PTR for 40.1% of the individuals. The most common violations of DV conditions were for failure to participate in domestic violence counseling and victim contact. This varied by initial caseload assignment. A higher percentage of individuals initially assigned to specialized domestic violence caseloads had a PTR filed for violations of domestic violence conditions, 54.3%, compared to those initially assigned to standard probation caseloads, 29.7% (χ^2=35.316, p<.001).

PTR victim contact. For the majority of domestic violence offenders, one of the specialized domestic violence conditions is no victim contact. Violating this condition, and having unapproved contact with the victim, was alleged for 18.5% of the sample. This varied by initial caseload assignment. A higher percentage of individuals initially assigned to specialized domestic violence caseloads had a PTR alleging violations of victim contact, 26.7%, compared to those initially assigned to standard probation caseloads, 12.4% (χ^2=19.047, p<.001).

PTR new domestic violence offense. While 26.2% of the sample had a PTR filed alleging new criminal behavior, only 11.9% had a PTR filed alleging a new domestic violence offense. This did not vary significantly by initial caseload assignment.

Probation Status. A final outcome variable looks at the probation status of the individual at the end of the data collection period. The majority of individuals in the sample had terminated probation at the time of data collection. For those that had not, a project end date of December 31, 2010 was identified, representing the end of the calendar year. The probation status on that date was used to determine whether the individual was successful or unsuccessful. Individuals with a probation status of successful include individuals who have completed their term of probation with a full termination, an early termination or a termination with earned time credit. Probationers who died while on probation, who had a warrant quashed and those who are still being actively supervised were also considered successful.

Probationers identified as unsuccessful include individuals who had their term of probation revoked, either to prison or to jail. It also includes individuals who were in warrants or in the Department of Corrections at the end of the data collection period.

Approximately one-third of the overall sample, 34.2%, had an unsuccessful probation status at the end of the data collection period. This varied by initial caseload assignment. A higher percentage of individuals initially assigned to specialized domestic violence caseloads had an unsuccessful probation status, 45.7%, compared to those initially assigned to standard probation caseloads, 25.8% (χ^2=24.678, p<.001).

Methods

This section will describe the statistical methods used to answer each of the research questions posed in the previous chapter. The research questions can be grouped into two broad categories. The first are questions about whether the existing assessment instruments currently being used by the Maricopa County Adult Probation Department with domestic violence offenders are predictive of probation outcomes. The second are questions identifying the strongest predictors of probation outcomes for domestic violence offenders. Both bivariate and multivariate statistics are used to address these questions.

Bivariate Statistics

Bivariate correlations. Bivariate correlations are used to look at the strength of the relationship between different variables. They identify the strength of the relationship between the DVSI score and the OST/FROST score. This helps identify how similar the measure of risk is between the two assessments. Bivariate correlations are also used to look at the relationship between each assessment score and each probation outcome. The strength of correlation between assessment scores and outcome variables helps to establish the predictive validity of the assessments. Finally, bivariate correlations are used to identify the relationship between each independent variable in the study with each dependent variable, or probation outcome. This helps determine which factors to include in subsequent logistic regression models.

Crosstabulations. Crosstabs, and their corresponding tests of significance, are used to look at the relationship between the risk categories of

each assessment and probation outcomes. This also helps establish the predictive validity of the assessment tools. If a risk assessment instrument is valid, it is expected that the failure rates will be higher for those assessed as high risk compared to those assessed as low risk. Multiple tests of significance will be used including Pearson's Chi Square, Gamma and Kendall's Tau. Each of the tests of significance is appropriate for determining the measure of association between two variables. Pearson's Chi Square is appropriate to use with tables with any number of rows and columns. Gamma and Kendall's Tau are appropriate with ordinal level data. Tau b will be used with symmetrical tables and Tau c will be used with asymmetrical tables.

ROC Analysis

The Receiver Operating Characteristic (ROC) is another statistic used to establish the predictive validity of an assessment tool. The ROC is a method that has been used to address the limitations of other methods typically used to predict certain behaviors, most notably violence. For example, the accuracy of a predictive device is often characterized by the percentage of correct predictions. However, this can be problematic with behaviors that have a low base rate. Interpretation of the results can also be affected by biases for certain types of prediction errors. ROC has been identified as a strategy that is not affected by base rates or selection ratios (Mossman, 1994; Rice & Harris, 1995). Typically, the Area Under the Curve (AUC) is used to summarize the ROC curve and it identifies how well the instrument performs better than chance. A value of .50 is considered no better than chance prediction.

Logistic Regression

All of the probation outcome measures included in the study are dichotomous variables. As a result, logistic regression models are created to help identify which factors are the strongest predictors of probation outcomes for domestic violence offenders. As a first step, models are developed to assess the combined impact of both the DVSI and the OST/FROST in predicting probation outcomes. Subsequent models include variables selected upon review of the bivariate correlations between the independent and dependent variables. Only those variables that are significantly correlated with outcomes are retained in the models.

Study Limitations

While this study has been designed to address some of the existing gaps in the literature on risk assessment for domestic violence offenders, there remain some limitations within the current study.

Sample Selection

Previous research on predictors of recidivism and risk assessment for domestic violence offenders has studied a very small portion of the offenses and relationships that might reflect domestic violence. This study was designed to be more inclusive of these offenses and relationships by selecting cases for the sample based upon the processes that staff in the Maricopa County Adult Probation Department use to identify an individual as a domestic violence offender. However, even though the intent was to be as inclusive as possible, it was still necessary to exclude certain individuals from the sample. Most notably

any individual that did not receive probation supervision by the Maricopa County Adult Probation Department was excluded from the sample. As a result, the study focuses exclusively on probationers defined as domestic violence offenders by the Maricopa County Adult Probation Department.

There may also be limitations to the process that was used to identify the sample. Individuals were selected for inclusion based upon the Planning & Research Division receiving a hard copy of the DVSI assessment that was conducted. While the guidelines established for the use of the DVSI specified that a copy of all DVSI assessments were to be submitted to the Planning & Research Division, it is possible that some lapses occurred. DVSI assessments were included over a 15-month period from April 2006 through June 2007. DVSI assessment dates were available for 567 of the 573 individuals in the sample. The number of assessments submitted each month ranged from a low of 20, in the first month following implementation of the DVSI, to a high of 54. The average number of assessments submitted each month was 37.8. The median was 37, indicating a distribution that is not skewed. This suggests that there was consistency in the submission of the DVSI assessments over the time period of the study.

Selection/Definition of Dependent Variables

There is much debate in the domestic violence literature about how to best measure recidivism for this population. Concerns exist that official records, such as arrest or conviction, underestimate the extent to which domestic violence occurs. While victim reports of subsequent violence are often perceived to be

more accurate estimates of subsequent violence (Heckert & Gondolf, 2004), there are challenges to obtaining information from victims.

For this study, information about subsequent acts of domestic violence is obtained from petitions to revoke and probation violation reports. This source of information allows the behavior to be captured without being formally processed or adjudicated by the criminal justice system. It also is not dependent upon contact with the victim.

Another potential limitation of the outcomes is that all of the outcomes require some element of discretion. One concern about petitions to revoke is filing a petition to revoke may be more reflective of officer behavior than offender behavior as probation officers have some discretion on when to file a petition to revoke.

Measurement Error

The data used for the study reflect the information that was collected by probation staff in course of their daily responsibilities. As a result, the analysis is only as good as the data that was collected. Concerns could be raised about the quality of this data. However, data collected in this way reflects the data that probation officers use to make decisions. Research has also been conducted to show that the quality of assessment information increases when officers have received formal training on the assessment and the longer the assessment tool is used (Flores et al., 2006). The Maricopa County Adult Probation Department has been using the OST at presentence since 1998 and the FROST in the field since 2005. Prior to implementing the FROST, department-wide training was

conducted. Since that time, refresher training has also been conducted. In addition, the timeliness and accuracy of the assessment information has been incorporated into officer performance appraisals, requiring supervisor observation of assessment interviews and scoring review. Staff responsible for using the DVSI was trained prior to implementation.

Chapter 4

VALIDATION OF RISK ASSESSMENT INSTRUMENTS FOR DOMESTIC VIOLENCE OFFENDERS

One of the primary reasons for engaging in risk assessment is the prediction of recidivism, or being able to predict who is likely to continue to engage in criminal behavior. In order for a risk assessment to have utility, there must be evidence of the predictive validity of the instrument. As a result, one of the primary purposes of this study is to determine if the risk assessment instruments currently being used by the Maricopa County Adult Probation Department, the DVSI and the OST/FROST, are predictive of probation outcomes in general, and domestic violence outcomes, in particular, for a sample of probationers convicted of domestic violence offenses.

Relationship Between the DVSI and the OST/FROST

Prior to assessing the predictive validity of each instrument, the relationship between the DVSI and the OST/FROST is determined. One of the questions within the literature on risk assessment for domestic violence offenders is whether there are risk factors unique to domestic violence offenders or if risk factors predictive of recidivism for offenders in general are also predictive of recidivism for domestic violence offenders. The DVSI was developed based upon a belief that there are some factors specific to domestic violence offenders that should be used to assess risk. The OST/FROST was developed as a general risk/needs assessment instrument, containing risk factors believed to be applicable across offender groups. Assessing the relationship between the DVSI and the

OST/FROST will help determine if each instrument is assessing risk in a unique way, or if the assessment instruments could be interchangeable. This study hypothesizes that since both assessments are assessing risk for recidivism, they are likely to be significantly correlated. However, it is also hypothesized that the correlation will not be very high, indicating that each instrument is assessing something unique.

Relationship Between Total Assessment Scores

The relationship between the DVSI and the OST/FROST was measured using the Pearson correlation coefficient. The bivariate correlations are presented in Table 4.1. The bivariate correlation between the total DVSI score and the total score from the initial assessment, whether it was the OST or the FROST, is .216. This is significant at the $p < .001$ level. As the FROST is used to reassess offender risk every six months, the relationship between the total DVSI score and subsequent assessments was also assessed. The bivariate correlation between the total DVSI score and the 2nd assessment is .181, which is significant at the $p < .001$ level. The bivariate correlation between the total DVSI score and the last assessment conducted is .243, which is significant at the $p < .001$ level.

Table 4.1

Correlations for DVSI Total Score and OST/FROST scores

	Initial assessment (N=573)	2nd assessment (N=446)	Last assessment (N=446)
Overall sample	.216***	.181***	.243***

***p<.001

While the DVSI contains unique items that are not included in the OST/FROST, there are some similar items included in the two assessments. Even

though the items are not identical, the similarity in items may inflate the relationship between the two assessments. Therefore, it is important to determine if a significant relationship is maintained once the similar items are excluded from the score. A description of the items that are similar is included in Table 4.2.

Table 4.2

Comparison of Similar Items on the DVSI and OST/FROST

DVSI item	OST/FROST item
Prior non-domestic violence convictions	Number of prior juvenile adjudications and adult convictions
Prior arrests for assault, harassment or menacing	Does the offender have at least one previous violent offense
Current employment status	Current verified employment

The total DVSI and initial OST/FROST scores were adjusted, removing the items that are similar across assessments. The bivariate correlation for the adjusted scores, including only what was unique to each assessment, dropped to -.004 and is not statistically significant, suggesting almost no relationship between the two assessments. This suggests that the DVSI and the OST/FROST are each assessing unique factors. The strength of the initial correlation can be attributed to the items that the assessments have in common.

The bivariate correlations between the total DVSI score and each category score from the initial OST/FROST were also calculated and are presented in Table 4.3. Of the ten categories in the OST/FROST, five of them are significantly related to the total DVSI score. The categories with the strongest relationship are the Criminal Behavior category and the Vocational/Financial Category. These are

the categories that include similar items across the assessments. Other OST/FROST categories that are significantly related to the total DVSI score include Physical Health/Medical, Residence and Neighborhood, and Drug Abuse. The OST/FROST categories that are not significantly related to the total DVSI score include Education, Family and Social Relationships, Alcohol, Mental Health, and Attitude. This provides additional support for the notion that the items in common between the assessments account for most of the relationship between them. The DVSI and the OST/FROST are each assessing risk in a different way.

Table 4.3

Correlations for DVSI Total Score and OST/FROST Categories

OST/FROST category	*r*
Physical Health/medical	.085*
Vocational/financial	.186***
Education	.057
Family and social relationships	.081
Residence and neighborhood	.094*
Alcohol	-.021
Drug abuse	.093*
Mental health	-.037
Attitude	.024
Criminal behavior	.298***

*p<.05. **p<.01. ***p<.001.

Relationship Between Risk Categories

A comparison was also made between the assessed risk levels of each assessment. Both the DVSI and the OST/FROST have cutoff scores that are used to help place individuals assessed with these instruments into risk categories. In all of the calculations there are two risk categories for the DVSI. DVSI scores of

eight or above are considered high risk while DVSI scores of seven and below are considered low risk. The OST/FROST scores are divided into risk categories three different ways. The first set of risk categories is based on the cutoff scores for the OST/FROST used by the Maricopa County Adult Probation in 2006, when the initial assessments for the sample were conducted. These cutoff scores created three different risk categories of low, medium, and high risk. The second set of risk categories is based on the cutoff scores for the OST/FROST implemented in 2009, following a statewide validation study of the OST/FROST. These cutoff scores created four different risk categories of low, medium-low, medium-high, and high risk. with separate cutoff scores for males and females. Finally, two risk categories, low risk and high risk, are created by combining the low risk and medium-low risk categories into a single low risk group and by combining the medium-high and high risk categories into a single high risk group. The relationships between the DVSI risk categories and the OST/FROST risk categories are presented in Tables 4.4 through 4.6.

Table 4.4

Crosstabulations for DVSI Risk Categories and OST/FROST Risk Categories, 2006 Cutoff Scores

	DVSI risk category	
OST/FROST risk category	Low risk	High risk
Low risk	76 (24.2%)	34 (13.1%)
Medium risk	229 (72.9%)	213 (82.2%)
High risk	9 (2.9%)	12 (4.6%)

Pearson $\chi 2=11.874$, $p < .01$

Table 4.5

Crosstabulations for DVSI Risk Categories and OST/FROST Risk Categories, 2009 Cutoff Scores

	DVSI risk category	
OST/FROST risk category	Low risk	High risk
Low risk	60 (19.1%)	22 (8.5%)
Medium-low risk	137 (43.6%)	94 (36.3%)
Medium-high risk	101 (32.2%)	119 (45.9%)
High risk	16 (5.1%)	24 (5.2%)

Pearson $\chi 2=23.625$, $p < .001$

Table 4.6

Crosstabulations for DVSI Risk Categories and OST/FROST Risk Categories, Two Risk Categories

	DVSI risk category	
OST/FROST risk category	Low risk	High risk
Low risk	197 (62.7%)	116 (44.8%)
High risk	117 (37.3%)	143 (55.2%)

Pearson $\chi 2=18.452$, $p < .001$

The relationship between risk categories on the DVSI and risk categories on the OST/FROST is statistically significant, regardless of which OST/FROST risk categories are used. For each set of cutoff scores, a higher percentage of individuals assessed as low risk on the DVSI are assessed as low risk on the OST/FROST than high risk. A similar pattern can be noted for individuals assessed as high risk. A higher percentage of individuals assessed as high risk on the DVSI are assessed as high risk on the OST/FROST than low risk. This can be seen most clearly in Table 4.6, where only two OST/FROST categories are used.

Of those assessed as low risk on the DVSI, 62,7% are also assessed as low risk on the OST/FROST. Of those assessed as high risk on the DVSI, 55.2% are also assessed as high risk on the OST/FROST. Overall, using the two categories from the OST/FROST, there is agreement in the assessed risk level between the assessments for 59.3% of the individuals. The assessed risk category differs between the assessments for 40.7% of the individuals.

Overall, the hypothesis that the DVSI and the OST/FROST would be significantly correlated was partially supported. The initial bivariate correlations indicated a significant relationship. However, the significance of the relationship disappeared when the items in common to the two assessments were removed from the total scores. Bivariate correlations between the DVSI and the individual categories of the OST/FROST also indicate that the strength of the relationship comes from those items in common between the two assessments. Finally, a comparison of the risk categories on the DVSI with the risk categories of the OST/FROST reveals that although the categories are related, there are differences between the assessments as being assessed as low risk on one assessment does not necessarily result in being assessed as low risk on the other.

Predictive Validity of the DVSI and the OST/FROST

Previous studies of both the DVSI (Williams & Grant, 2006; Williams & Houghton, 2004) and the OST/FROST (Lowenkamp, Latessa, & Bechtel, 2009) have found evidence of the predictive validity of each assessment instrument. Based upon these previous studies, it was hypothesized that the DVSI and the OST/FROST would be predictive of both general and domestic violence specific

probation outcomes. A number of different analyses were conducted to assess the predictive validity of the DVSI and of the OST/FROST. Crosstabulations and tests of significance, were used to identify the relationship between the risk levels used by each assessment and each of the outcome measures. The crosstabulations provide the failure rate for each assessed risk level. If a risk assessment instrument is valid, it is expected that the failure rates will be higher for those assessed as high risk compared to those assessed as low risk. Bivariate correlations were used to determine the relationship between the total assessment score and each outcome measure. Finally, the predictive validity was assessed using the Receiver Operating Characteristic (ROC) and looking at the Area Under the Curve (AUC) to determine if the assessment instruments predict outcomes better than chance.

Multiple outcome measures were collected for this study to capture general probation outcomes as well as domestic violence specific outcomes. The outcomes measures included whether or not a Petition to Revoke (PTR) was filed, whether a PTR was filed for technical violations of probation only, whether or not a PTR was filed for a new crime, whether a PTR was filed for violations of specific domestic violence conditions of probation, whether a PTR was filed for having victim contact, whether a PTR was filed for a new domestic violence offense and the individual's overall probation status, either at termination of probation or at the end of the data collection period.

This section will provide the results of the crosstabulations first, followed by the bivariate correlations and finally the results of the ROC analysis. The

analyses were conducted for the overall sample. They were also conducted for sub-groups within the sample to determine if the DVSI or the OST/FROST performs differently for various sub-groups. These subgroups included gender, ethnicity, and victim relationship.

Crosstabulations

Overall Sample. The Maricopa County Adult Probation Department uses cutoff scores with the DVSI that create two risk categories, low risk and high risk. The low risk category includes individuals scoring seven or below on the DVSI. The high risk category includes individuals scoring eight or above on the DVSI. Table 4.7 provides the crosstabulations for the DVSI risk categories and each of the outcome measures. The failure rate for each outcome measure, by risk category, is provided. For each outcome measure, a higher percentage of individuals in the high risk category failed, compared to the low risk category. The difference in failure rates was greatest for the outcomes of PTR filed, PTR filed for violating domestic violence conditions, and probation status, with a difference of approximately 21%. The Pearson chi-square, gamma and Kendall's Tau b value for each of these outcomes was statistically significant. The difference in failure rates was also statistically significant for PTR filed for technical violations only and PTR filed for victim contact. The difference was not significant for either of the outcomes related to new criminal behavior, which included PTR filed for any new offense, or a PTR filed for a new domestic violence offense.

Table 4.7

Crosstabulations for DVSI Risk Categories and Outcome Measures (n=573)

DVSI risk category	PTR filed***	PTR – technical violations only***	PTR-new crime	PTR – violation of DV conditions***	PTR- victim contact**	PTR- new DV offense	Unsuccessful probation status***
Low (n=314)	128 (40.8%)	54 (17.2%)	74 (23.6%)	97 (30.9%)	44 (14.0%)	32 (10.2%)	78 (24.8%)
High (n=259)	161 (62.2%)	85 (32.8%)	76 (29.4%)	133 (51.4%)	62 (23.9%)	36 (13.9%)	118 (45.6%)

*p<.05. **p<.01. ***p<.001.

Table 4.8

Crosstabulations for OST/FROST Risk Categories, 2006 Cutoff Scores and Outcome Measures (n=573)

OST/FROST risk category	PTR filed***	PTR – technical violations only***	PTR-new crime***	PTR – violation of DV conditions***	PTR- victim contact***	PTR- new DV offense*	Unsuccessful probation status***
Low (n=110)	21 (19.1%)	11 (10.0%)	10 (9.1%)	11 (10.0%)	5 (4.5%)	6 (5.5%)	10 (9.1%)
Medium (n=442)	250 (56.6%)	118 (26.7%)	132 (29.9%)	206 (46.6%)	95 (21.5%)	61 (13.8%)	172 (38.9%)
High (=21)	18 (85.7%)	10 (47.6%)	8 (38.1%)	13 (61.9%)	6 (28.6%)	1 (4.8%)	14 (66.7%)

*p<.05. **p<.01. ***p<.001.

At the time the DVSI was implemented, the Maricopa County Adult Probation Department used cutoff scores for the OST/FROST that created three different risk categories, low risk, medium risk and high risk. The low risk category included individuals scoring between 0-6, medium risk indicated a score of 7-20 and high risk included those scoring 21 and above. Table 4.8 provides the crosstabulations for the OST/FROST risk categories, using the 2006 cutoff scores, and each of the outcome measures. For each outcome measure except for PTR for a new domestic violence offense, a higher percentage of individuals in the medium risk category failed compared to the low risk category and a higher percentage of individuals in the high risk category failed compared to the medium risk category. Greater variation in failure rates could also be found between risk categories on the OST/FROST compared to the DVSI. For example, the difference in failure rates from the low risk to the high risk for PTR filed is 66.6%. In addition, the failure rates for the low risk group for each outcome except for PTR filed is 10.0% or less. The relationship between the 2006 OST/FROST risk categories and each outcome measure was statistically significant, using Pearson's chi-square, gamma and Kendall's Tau c.

In 2009, following a statewide validation study of the OST/FROST, the cutoff scores were changed to include four risk categories, low risk, medium-low risk, medium-high risk and high risk. In addition, separate cutoff scores were developed for males and females. The low risk category includes males scoring 0-5 and females scoring 0-8. The medium-low risk category includes males scoring 6-10 and females scoring 9-13. The medium-high risk category includes

males scoring 11-17 and females scoring 14-20. The high risk category includes males scoring 18 and above and females scoring 21 and above. Table 4.9 provides the crosstabulations for the OST/FROST risk categories and each outcome measure using the 2009 cutoff scores. For each outcome measure except for PTR filed for technical violations only, the failure rate increased as the risk category increased. The relationship between each outcome measure and the 2009 OST/FROST risk categories was statistically significant, regardless of the measure of association used.

Gender. Crosstabulations and tests of significance were examined for males and females separately to determine if the relationship between the risk categories of the DVSI and the OST/FROST and the outcome measures varied by males and females. The results for the 487 males are presented first, and are shown in Table 4.10. On the DVSI for males, for each outcome measure, a higher percentage of males in the high risk category failed compared to the low risk category. The difference was significant for each outcome measure except for those related to new criminal behavior. It was not significant for PTR filed for new crime or PTR filed for new domestic violence offense. These findings are similar to those found for the DVSI with the overall sample.

Table 4.9

Crosstabulations for OST/FROST Risk Categories, 2009 Cutoff Scores and Outcome Measures (n=573)

OST/FROST risk category	PTR filed***	PTR – technical violations only***	PTR-new crime***	PTR – violation of DV conditions***	PTR- victim contact***	PTR- new DV offense**	Unsuccessful probation status***
Low (n=82)	13 (15.9%)	6 (7.3%)	7 (8.5%)	9 (11.0%)	3 (3.7%)	2 (2.4%)	7 (8.5%)
Medium-low (n=231)	106 (45.9%)	52 (22.5%)	54 (23.4%)	79 (34.2%)	38 (16.5%)	28 (12.1%)	65 (28.0%)
Medium-high (n=220)	138 (62.7%)	69 (31.4%)	69 (31.4%)	117 (53.2%)	51 (23.2%)	29 (13.2%)	99 (45.0%)
High (n=40)	32 (80.0%)	12 (30.0%)	20 (50.0%)	25 (62.5%)	14 (35.0%)	9 (22.5%)	25 (62.5%)

*p<.05. **p<.01. ***p<.001.

Table 4.10

Crosstabulations for Assessment Risk Categories and Outcome Measures, Males (n=487)

Assessment	PTR filed	PTR – technical violations only	PTR-new crime	PTR – violation of DV conditions	PTR- victim contact	PTR- new DV offense	Unsuccessful probation status
DVSI risk category							
Low (n=257)	105(40.9%)***	43 (16.7%)***	62 (24.1%)	81 (31.%)***	36 (14.0%)**	27 (10.5%)	63 (24.1%)***
High (n=230)	146 (63.5%)	74 (32.2%)	72 (31.3%)	121 (52.6%)	56 (24.3%)	34 (14.8%)	113 (49.1%)
OST/FROST 2006 cutoffs							
Low (n=98)	18 (18.4%)***	9 (9.2%)***	9 (9.2%)***	10 (10.2%)***	5 (5.1%)***	5 (5.1%)**	9 (9.2%)***
Medium (n=374)	220 (58.8%)	101 (27.0%)	119 (31.8%)	182 (48.7%)	82 (21.9%)	55 (14.7%)	155 (41.4%)
High (n=15)	13 (86.7%)	7 (46.7%)	6 (40.0%)	10 (66.7%)	5 (33.3%)	1 (6.7%)	12 (80.0%)
OST/FROST 2009 cutoffs							
Low (n=62)	8 (12.9%)***	3 (4.8%)***	5 (8.1%)***	6 (9.7%)***	2 (3.2%)***	1 (1.6%)**	5 (8.1%)***
Medium-low (n=193)	88 (45.6%)	43 (22.3%)	45 (23.3%)	66 (34.2%)	31 (16.1%)	23 (11.9%)	54 (28.0%)
Medium-high (n=198)	128 (64.6%)	62 (31.1%)	66 (33.3%)	108 (54.4%)	46 (23.2%)	28 (14.1%)	94 (47.5%)
High (n=34)	27 (79.4%)	9 (26.5%)	18 (52.9%)	22 (64.7%)	13 (38.2%)	9 (26.5%)	23 (67.6%)

*p<.05. **p<.01. ***p<.001.

Using the OST/FROST cutoff scores from 2006, for each outcome measure, a higher percentage of males in the medium risk category failed compared to the low risk category. A higher percentage of males in the high risk category failed compared to the medium risk category. Each measure of association for each outcome measure was statistically significant, including those related to new criminal behavior.

The results for males using the OST/FROST cutoff scores from 2009 were similar to those found for the 2006 cutoff scores, and also mirror the results found for the overall sample. For each outcome measure, the higher the assessed risk category, the higher the percentage of failures. The measures of association used for each outcome measure was statistically significant.

While the crosstabulations and tests of significance for males mirror the results found for the overall sample, the results for females differ. These results are presented in Table 4.11. There were 86 females in the sample. For females, the failure rate was higher for those assessed as high risk on the DVSI compared to those assessed as low risk for the outcome measures PTR filed, PTR filed for technical violations only, PTR filed for DV conditions, and PTR filed for victim contact. However, for the outcome measures, PTR filed for a new crime, PTR filed for a new DV offense and probation status, a higher percentage of females assessed as low risk on the DVSI failed. In addition, none of the measures of association reached statistical significance for the relationship between DVSI risk categories and any of the outcome measures.

Table 4.11

Crosstabulations for Assessment Risk Categories and Outcome Measures, Females (n=86)

Assessment	PTR filed	PTR – technical violations only	PTR-new crime	PTR – violation of DV conditions	PTR- victim contact	PTR- new DV offense	Unsuccessful probation status
DVSI risk category							
Low (n=57)	23 (40.4%)	11 (19.3%)	12 (21.1%)	16 (28.1%)	8 (14.0%)	3 (5.3%)	15 (26.3%)
High (n=29)	15 (51.7%)	11 (37.9%)	4 (13.8%)	12 (41.4%)	6 (20.7%)	1 (3.4%)	5 (17.2%)
OST/FROST 2006 cutoffs							
Low (n=12)	3 (25.0%)*	2 (16.7%)	1 (8.3%)	1 (8.3%)*	0 (0%)	0 (0%)	1 (8.3%)
Medium (n=68)	30 (44.1%)	17 (25.0%)	13 (19.1%)	24 (35.3%)	13 (19.1%)	4 (23.5%)	17 (25.0%)
High (n=6)	5 (83.3%)	3 (50.0%)	2 (33.3%)	3 (50.0%)	1 (16.7%)	0 (0%)	2 (33.3%)
OST/FROST 2009 cutoffs							
Low (n=20)	5 (25.0%)*	3 (15.0%)	2 (10.0%)	3 (15.0%)c	1 (5.0%)	0 (0%)	2 (10.0%)
Medium-low (n=38)	18 (47.4%)	9 (23.7%)	9 (23.7%)	13 (34.2%)	7 (18.4%)	3 (7.9%)	11 (28.9%)
Medium-high (n=22)	10 (45.5%)	7 (31.8%)	3 (13.6%)	9 (40.9%)	5 (22.7%)	1 (4.5%)	5 (22.7%)
High (n=6)	5 (83.3%)	3 (50.0%)	2 (33.3%)	3 (50.0%)	1 (16.7%)	0 (0%)	2 (33.3%)

*p<.05. **p<.01. ***p<.001.

Using the 2006 OST/FROST cutoff scores, a higher percentage of females in the medium risk category failed compared to the low risk category and a higher percentage of females in the high risk category failed compared to the medium risk category for the outcome measures of PTR filed, PTR filed for technical violations only, PTR filed for new crime, PTR filed for DV conditions, and probation status. A higher percentage of females in the medium risk category failed compared to the high risk category for the outcomes of PTR filed for victim contact and PTR filed for new DV offense. The Pearson chi-square value was not statistically significant for any of the outcome measures. However, Gamma and Kendall's Tau c reached significance at the $p<.05$ level for the outcomes PTR filed and PTR filed for DV conditions.

The 2009 cutoff scores for females on the OST/FROST also revealed some inconsistent patterns. For each outcome measure, a higher percentage of females assessed as medium-low risk failed compared to females assessed as low risk. However, for the outcomes of PTR filed, PTR filed for new crime, PTR filed for new DV offense, and probation status a higher percentage of females assessed as medium-low risk failed compared to those assessed as medium-high risk. Also, a higher percentage of females assessed as medium-high risk failed compared to those assessed as high risk for the outcomes PTR filed for victim contact, and PTR filed for new DV offense. The Pearson's chi-square value was not statistically significant for any of the outcome measures. However, Gamma and Kendall's Tau c reached significance at the $p<.05$ level for the outcomes PTR filed and PTR filed for DV conditions.

Ethnicity. Crosstabulations and tests of significance were examined for non-Hispanics and Hispanics separately to determine if the relationship between the risk categories of the DVSI and the OST/FROST and the outcome measures varied by ethnicity. The results for the 376 non-Hispanics are provided first and are presented in Table 4.12. On the DVSI, for each outcome

Table 4.12

Crosstabulations for Assessment Risk Categories and Outcome Measures, Non-Hispanics (n=376)

Assessment	PTR filed	PTR – technical violations only	PTR-new crime	PTR – violation of DV conditions	PTR- victim contact	PTR- new DV offense	Unsuccessful probation status
DVSI risk category							
Low (n=204)	86 (42.2%)***	38 (18.6%)***	48 (23.5%)	65 (31.9%)***	32 (15.7%)*	19 (9.3%)	56 (27.5%)**
High (n=172)	106 (61.6%)	57 (33.1%)	49 (28.5%)	85 (49.4%)	43 (25.0%)	24 (14.0%)	73 (42.4%)
OST/FROST 2006 cutoffs							
Low (n=63)	12 (19.0%)***	10 (15.9%)**	2 (3.2%)***	7 (11.1%)***	3 (4.8%)***	1 (1.6%)**	6 (9.5%)***
Medium (n=299)	169 (56.5%)	79 (26.4%)	90 (30.5%)	136 (45.5%)	68 (22.7%)	42. (14.0%)	115 (38.5%)
High (n=14)	11 (78.6%)	6 (42.9%)	5 (35.7%)	7 (50.0%)	4 (28.6%)	0 (0%)	8 (57.1%)
OST/FROST 2009 cutoffs							
Low (n=50)	6 (12.0%)***	5 (10.0%)**	1 (2.0%)***	5 (10.0%)***	2 (4.0%)***	0 (0%)**	3 (6.0%)***
Medium-low (n=142)	65 (45.8%)	32 (22.5%)	33 (23.2%)	47 (33.1%)	25 (17.6%)	16 (11.3%)	42 (29.4%)
Medium-high (n=155)	100 (64.5%)	50 (32.3%)	50 (23.9%)	83 (53.5%)	39 (25.2%)	22 (14.2%)	68 (43.9%)
High (n=29)	21 (72.4%)	8 (27.6%)	13 (37.5%)	15 (71.4%)	9 (31.0%)	5 (17.2%)	16 (55.2%)

*p<.05. **p<.01. ***p<.001.

measure, a higher percentage of non-Hispanics assessed as high risk failed compared to those assessed as low risk. Tests of significance reveal a significant association between DVSI risk categories and the outcomes measures of PTR filed, PTR filed for technical violations only, PTR filed for DV conditions, PTR filed for victim contact and probation status. The relationship is not significant for either of the outcomes measures associated with new criminal behavior.

Using the 2006 cutoff scores for the OST/FROST, for each outcome measure except PTR for a new DV offense, a higher percentage of non-Hispanics assessed as medium risk failed compared to those assessed as low risk and a higher percentage of non-Hispanics assessed as high risk failed compared to those assessed as medium risk. The Pearson's chi-square value is significant for each outcome measure except for PTR for technical violations only. However, the Gamma and Kendall's Tau c for that outcome was significant at the $p<.05$ level.

Similar results were found for non-Hispanics using the 2009 cutoff scores for the OST/FROST. For each outcome measures except one, the higher the assessed risk category on the OST/FROST, the higher the percentage of failures. For PTR filed for technical violations only, a higher percentage of individuals assessed as medium-high risk failed compared to those assessed as high risk. The tests of significance for each outcome measure are significant.

Overall, the results for the 197 Hispanics in the sample are similar to the results for the non-Hispanics, and are presented in Table 4.13. For the DVSI risk categories, for each outcome measure, a higher percentage of those assessed as high risk failed compared to those assessed as low risk. Tests of significance for

Table 4.13

Crosstabulations for Assessment Risk Categories and Outcome Measures, Hispanics (n=197)

Assessment	PTR filed	PTR – technical violations only	PTR-new crime	PTR – violation of DV conditions	PTR- victim contact	PTR- new DV offense	Unsuccessful probation status
DVSI risk category							
Low (n=110)	42 (38.2%) ***	16 (14.5%) **	26 (23.6%)	32 (29.1%) ***	12 (10.9%) *	11 (10.0%)	22 (20.0%) ***
High (n=87)	55 (63.2%)	28 (32.2%)	27 (31.0%)	48 (55.2%)	19 (21.8%)	11 (12.6%)	45 (51.7%)
OST/FROST 2006 cutoffs							
Low (n=47)	9 (19.1%) ***	1 (2.1%) ***	8 (17.0%) *	4 (8.5%) ***	2 (4.3%) **	4 (8.5%)	4 (8.5%) ***
Medium (n=143)	81 (56.6%)	39 (27.3%)	42 (29.4%)	70 (59.0%)	27 (18.9%)	17 (11.9%)	57 (39.9%)
High (n=7)	7 (100.0%)	4 (57.1%)	3 (42.9%)	6 (85.7%)	2 (28.6%)	1 (14.3%)	6 (85.7%)
OST/FROST 2009 cutoffs							
Low (n=32)	7 (21.9%) ***	1 (3.1%) **	6 (18.8%) *	4 (12.5%) ***	1 (3.1%) **	1 (3.1%) *	4 (12.5%) ***
Medium-low (n=89)	41 (46.1%)	20 (22.5%)	21 (23.6%)	32 (36.0%)	13 (14.6%)	10 (11.2%)	23 (25.8%)
Medium-high (n=65)	38 (58.5%)	19 (29.2%)	19 (29.2%)	34 (52.3%)	12 (18.5%)	10 (11.2%)	31 (47.7%)
High (n=11)	11 (100.0%)	4 (36.4%)	7 (63.6%)	10 (90.9%)	5 (45.5%)	4 (36.4%)	9 (81.8%)

*p<.05. **p<.01. ***p<.001

each of the outcome measures, except for those associated with new criminal behavior, are significant.

Using the 2006 cutoff scores for the OST/FROST, a higher percentage of individuals assessed as medium risk failed compared to those assessed low risk and a higher percentage of those assessed as high risk failed compared to those assessed as medium risk. The relationship between the 2006 cutoff scores and each outcome measures was significant except for PTR filed for new DV offense. In addition, PTR filed for new crime was only significant as measured by Gamma and Kendall's Tau c, and not the Pearson's chi-square.

Using the 2009 OST/FROST cutoff scores, for each outcome, as the assessed risk level increased, so did the failure rate. All of the outcomes were significantly associated with the 2009 cutoff scores. However, PTR for new DV offense was significant only as measured by Pearson's chi-square and not by Gamma and Kendall's Tau c, although these measures of association approached significance at p=.057.

Victim Relationship. Many studies of domestic violence risk assessment instruments have focused on intimate partner violence. The current sample included acts of domestic violence against intimate partners but also against individuals in other familial relationships (e.g. parent, child, and sibling). Crosstabulations and tests of significance were examined for offenders with intimate partner victims and offenders with victims from other relationships separately to determine if the relationship between the risk categories of the DVSI and the OST/FROST and the outcome measures varied by victim relationship.

The results for the 421 individuals that committed offenses against an intimate partner are presented first, in Table 4.14.

On the DVSI, for each outcome measure, a higher percentage of offenders with intimate partner victims assessed as high risk failed compared to those assessed as low risk. The relationship was significant for all outcome measures except for those associated with new criminal behavior.

Using the 2006 OST/FROST cutoff scores, a higher percentage of offenders with intimate partner victims assessed as medium risk failed compared to those assessed as low risk, and a higher percentage assessed as high risk failed compared to those assessed as medium risk for all outcome measures except those associated with new criminal behavior. A higher percentage assessed as medium risk failed compared to those assessed as high risk for PTR filed for new crime and PTR filed for a new DV offense. The measures of association were significant for all of the outcome measures.

Using the 2009 OST/FROST cutoff scores, for each outcome measure, the higher the assessed risk category, the higher the percentage of failures. Measures of association were significant for all outcome measures.

There were 206 offenders that had victims other than intimate partners. These individuals are not a mutually exclusive group from those who had intimate partner victims because a number of offenders had multiple victims of differing relationships. Of the 206, 62 of these offenders also had intimate partner victims. These results are presented in Table 4.15. On the DVSI, for each outcome measure, a higher percentage of offenders with non-intimate partner victims failed

Table 4.14

Crosstabulations for Assessment Risk Categories and Outcome Measures, Intimate Partner Victims (n=421)

Assessment	PTR filed	PTR – technical violations only	PTR-new crime	PTR – violation of DV conditions	PTR- victim contact	PTR- new DV offense	Unsuccessful probation status
DVSI risk category							
Low (n=213)	78 (36.6%) ***	31 (14.6%) ***	47 (22.1%)	63 (29.6%) ***	32 (15.0%) **	22 (10.3%)	41 (19.2%) ***
High (n=208)	127 (61.1%)	68 (32.7%)	59 (28.4%)	106 (51.0%)	55 (26.4%)	26 (12.5%)	92 (44.2%)
OST/FROST 2006 cutoffs							
Low (n=85)	15 (17.6%) ***	7 (8.2%) ***	8 (9.4%) ***	10 (11.8%) ***	5 (5.9%) ***	3 (3.5%) **	7 (8.2%) ***
Medium (n=324)	179 (55.2%)	84 (25.9%)	95 (29.3%)	150 (46.3%)	78 (24.1%)	44 (13.6%)	118 (36.4%)
High (n=12)	11 (91.7%)	8 (66.7%)	3 (25.0%)	9 (75.0%)	4 (33.3%)	1 (8.3%)	8 (66.7%)
OST/FROST 2009 cutoffs							
Low (n=61)	10 (16.4%) ***	4 (6.6%) ***	6 (9.8%) ***	7 (11.5%) ***	3 (4.9%) ***	1 (1.6%) **	5 (8.2%) ***
Medium-low (n=185)	77 (41.6%)	35 (18.9%)	42 (22.7%)	63 (34.1%)	34 (18.1%)	21 (11.4%)	44 (23.8%)
Medium-high (n=150)	99 (66.0%)	51 (34.0%)	48 (32.0%)	83 (54.0%)	41 (27.3%)	21 (14.0%0	69 (46.0%)
High (n=25)	19 (76.0%)	9 (36.0%)	10 (40.0%)	16 (64.0%)	9 (36.0%)	5 (20.0%)	15 (60.0%)

*p<.05. **p<.01. ***p<.001.

Table 4.15

Crosstabulations for Assessment Risk Categories and Outcome Measures, Non-Intimate Partner Victims (n=206)

Assessment	PTR filed	PTR – technical violations only	PTR-new crime	PTR – violation of DV conditions	PTR- victim contact	PTR- new DV offense	Unsuccessful probation status
DVSI risk category							
Low (n=138)	64 (46.4%)	28 (20.3%)	36 (26.1%)	43 (31.2%) *	16 (11.6%)	13 (9.4%)	45 (32.6%)
High (n=68)	40 (58.8%)	20 (29.4%)	20 (29.4%)	32 (47.1%)	12 (17.6%)	9 (13.2%)	27 (39.7%)
OST/FROST 2006 cutoffs							
Low (n=37)	5 (13.5%) ***	3 (8.1%) **	2 (5.4%) ***	1 (2.7%) ***	0 (0%) ***	1 (2.7%)	3 (8.1%) ***
Medium (n=156)	89 (57.1%)	41 (26.3%)	48 (30.8%)	69 (44.2%)	25 (16.0%)	21 (13.5%)	61 (39.1%)
High (n=13)	10 (76.0%)	4 (30.8%)	6 (46.2%)	5 (38.5%)	3 (23.1%)	0 (0%)	8 (61.5%)
OST/FROST 2009 cutoffs							
Low (n=34)	5 (14.7%) ***	3 (8.8%)	2 (5.9%) [a]	3 (8.8%) [a]	1 (2.9%) [b]	0 (0%) [c]	3 (8.8%) [b]
Medium-low (n=67)	36 (53.7%)	17(25.4%)	19 (28.4%)	23 (34.3%)	6 (9.0%)	9 (13.4%)	26 (38.8%)
Medium-high (n=84)	46 (54.8%)	23 (27.4%)	23 (27.4%)	38 (45.2%)	14 (16.7%)	8 (9.5%)	31 (36.9%)
High (n=21)	17 (81.0%)	5 (23.8%)	12 (57.1%)	11 (52.4%)	7 (33.3%)	5 (23.8%)	12 (57.1%)

*p<.05. **p<.01. ***p<.001.

compared to those assessed as low risk. However, the relationship between DVSI risk categories and outcomes measures was only significant for PTR filed for DV conditions.

Using the 2006 OST/FROST cutoff scores, a higher percentage of those assessed as medium risk failed compared to those assessed as low risk and a higher percentage of those assessed as high risk failed compared to medium risk for all outcomes except PTR filed for DV conditions and PTR filed for new DV offense. For those outcomes, a higher percentage of individuals assessed as medium risk failed compared to those assessed as high risk. The relationship was significant for all outcomes except for PTR filed for new DV offense. In addition, the relationship with PTR filed for technical violations only was only significant when measured by Gamma and Kendall's Tau c.

Using the 2009 OST/FROST cutoff scores, as the assessed risk level increased, so did the failure rate for PTR filed, PTR filed for DV conditions, and PTR filed for victim contact. For the outcomes of PTR filed for new crime, PTR filed for new DV offense and probation status, a higher percentage of those assessed as medium-low risk failed compared to those assessed as medium-high risk. For the outcome PTR filed for technical violations, a higher percentage of those assessed as medium-high risk failed compared to those assessed as high risk. Measures of association were significant for all of the outcome measures. However, PTR filed for new DV offense was significant only as measured by Pearson chi-square.

Summary. Overall, the review of the failure rates by the risk categories of the DVSI and the OST/FROST shows, in general, that the cutoff scores being used with both assessments distinguish failure by risk, offering evidence of the predictive validity of the assessments. However, there is variation in the ability to predict failure across assessment tools, across outcome measures, and across sub-groups of the population. Looking at the overall sample, the cutoff scores used for the OST/FROST were significantly related to all outcome measures. The DVSI was not significantly related to the outcome measures related to new criminal behavior, either PTR filed for a new crime, or PTR filed for a new DV offense. The DVSI risk categories were also not significantly related to the criminal behavior outcome measures for any of the sub-groups. The outcomes with the strongest relationship to the risk categories of the assessment appear to be PTR filed and PTR filed for DV conditions. Finally, neither the DVSI nor the OST/FROST performed well for female offenders convicted of a domestic violence offense. The DVSI also did not perform as well for cases with non-intimate partner victims, or for Hispanics.

Bivariate Correlations

Bivariate correlations, reflected by the Pearson's correlation coefficient, were examined to determine the strength of the relationship between the total assessment score on the DVSI and on the OST/FROST with each of the outcome measures. Bivariate correlations help determine whether or not there is a significant relationship between the assessment score and each outcome measure along with the strength and direction of the relationship. A significant correlation

provides evidence of the ability of the assessment instrument to predict the outcome.

Correlations between the total DVSI score and each outcome measure are presented in Table 4.16. The total DVSI score was significantly correlated with all of the outcome measures for the overall sample. The strongest correlations are with the outcomes PTR filed for a violation of DV conditions and probation status,.268, followed by PTR filed, .260. Although statistically significant, the correlations between total DVSI score and outcome measures related to new criminal behavior were very small with correlations of .112 for PTR filed for new crime and .097 for PTR filed for new DV offense.

The correlations between the total DVSI score and the outcome measures varied across sub-groups of the sample. For males and non-Hispanics, the DVSI score was significantly correlated with all of the outcome measures. The strongest correlations for males are with probation status, .293, followed by PTR filed, .268, and PTR filed for violation of DV conditions, .267. For non-Hispanics, the strongest relationship is with PTR filed,.226, followed by PTR filed for violation of DV conditions, .223 and probation status, .216.

The strongest correlations for total DVSI score and outcomes measures were for Hispanics with a correlation of .375 for probation status, .363 for PTR filed for violation of DV conditions, and .330 for PTR filed. Overall, PTR filed for violation of DV conditions is significant across all of the samples studied. Probation status and PTR filed are significant for all sub-groups but females. The outcomes related to new criminal behavior had the weakest correlations and were

Table 4.16

Correlations Between Total DVSI Score and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=573)	.260***	.188***	.112**	.268***	.141***	.097*	.268***
Males (n=487)	.268***	.191***	.117**	.267***	.141**	.092*	.293***
Females (n=86)	.178	.199	.004	.250*	.132	.068	-.043
Non-Hispanics (n=376)	.226***	.152**	.107*	.223***	.137**	.127*	.216***
Hispanics (n=197)	.330***	.263***	.125	.363***	.145*	.036	.375***
Intimate partner victims (n=421)	.272***	.217***	.101*	.249***	.147**	.068	.283***
Non-intimate partner victims (n=206)	.183**	.082	.128	.232***	.065	.067	.174***

*p<.05. **p<.01. ***p<.001.

less likely to be significant across subgroups. PTR filed for a new crime was significant for the overall sample, males, non-Hispanics, and intimate partner victims. PTR filed for new DV offense was significant for the overall sample, males and non-Hispanics.

Correlations between the initial OST/FROST score and each outcome measure are presented in Table 4.17. The initial OST/FROST score is significantly correlated with each outcome measure for the overall sample. The correlations between the initial OST/FROST score and outcomes are slightly stronger than those found between the total DVSI score and outcomes. The strongest correlations for the overall sample were for PTR filed, .310, followed by PTR filed for violation of new DV conditions, .286, and probation status, .282.

The initial OST/FROST score is significantly correlated with PTR filed and probation status for all sub-groups. The strongest correlation for PTR filed is .342 for intimate partner victims, followed by .327 for Hispanics. The strongest correlation for probation status is.360 for Hispanics, followed by .331 for males. Overall, the weakest correlations with the initial OST/FROST score are for PTR filed for technical violations only and PTR for new DV offense. For females, the initial OST/FROST score was only significantly correlated with PTR filed.

As the OST and FROST contain both static and dynamic risk factors, reassessments conducted using the FROST provides the opportunity to measure changes in overall OST/FROST scores. The correlation between subsequent FROST scores and the outcome measures was also assessed to determine if the FROST remains correlated with outcomes. Correlations between the second

Table 4.17

Correlations Between Initial OST/FROST Score and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=573)	.310***	.165***	.192***	.286***	.185***	.087*	.282***
Males (n=487)	.329***	.159***	.217***	.318***	.201***	.112*	.331***
Females (n=86)	.259*	.197	.109	.173	.119	-.014	.087
Non-Hispanics (n=376)	.310***	.151**	.194***	.262***	.173***	.075	.243***
Hispanics (n=197)	.327***	.187***	.194***	.340***	.198**	.111	.360***
Intimate partner victims (n=421)	.342***	.233***	.166***	.326***	.202***	.090	.305***
Non-intimate partner victims (n=206)	.294***	.108	.228***	.232***	.239***	.111	.216***

*p<.05. **p<.01. ***p<.001.

FROST assessment and each outcome measure are presented in Table 4.18. The total FROST score for the second assessment conducted was significantly correlated with all outcome measures except for PTR filed for new DV offense for the overall sample. The strongest correlation for the overall sample is for PTR filed, .345, followed by PTR for violation of DV conditions, .336. These two outcome measures were significantly correlated with the second FROST assessment for all subgroups that were studied. The strongest correlations with the second FROST assessment were .404 for PTR filed and PTR filed for violation of DV conditions for intimate partner victims. The weakest correlations are for PTR filed for a new DV offense. This outcome was only significantly related to intimate partner victims for the second FROST assessment. Finally, the second FROST assessment is only significantly related to PTR filed for females.

The correlation between the last FROST assessment conducted and each outcome measure was also examined. Correlations between the last FROST assessment score and each outcome measure are presented in Table 4.19. The correlations with the last assessment conducted produced the strongest correlations with outcome measures. The strongest correlations are for the outcome PTR filed for intimate partner victims, .463, males, .433, non-Hispanics, .418, and the overall sample, .410. The last FROST assessment score is significantly related to all of the outcome measures for the overall sample, males, non-Hispanics, and intimate partner victims. The last FROST assessment score was significantly related to PTR filed, PTR filed for a new crime, PTR filed for violation of DV conditions, PTR filed for victim contact, and probation status for

Table 4.18

Correlations Between Second FROST Assessment Score and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=446)	.345***	.188***	.226***	.336***	.181***	.091	.292***
Males (n=337)	.367***	.194***	.242***	.352***	.194***	.090	.320***
Females (n=69)	.263*	.148	.180	.288*	.120	.143	.184
Non-Hispanics (n=298)	.363***	.170**	.257***	.334***	.116*	.063	.305***
Hispanics (n=148)	.278***	.204*	.146	.333***	.322***	.146	.242**
Intimate partner victims (n=333)	.404***	.244***	.244***	.401***	.251***	.110*	.367***
Non-intimate partner victims (n=157)	.263***	.111	.199*	.194*	.076	.101	.146

*p<.05. **p<.01. ***p<.001.

Table 4.19

Correlations Between Last FROST Assessment Score and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=446)	.410***	.204***	.286***	.381***	.171***	.156***	.368***
Males (n=337)	.433***	.224***	.291***	.399***	.181***	.162**	.388***
Females (n=69)	.315**	.093	.313**	.320**	.125	.157	.302*
Non-Hispanics (n=298)	.418***	.158**	.330***	.367***	.128*	.160**	.374***
Hispanics (n=148)	.379***	.299***	.182*	.342***	.263***	.140	.406***
Intimate partner victims (n=333)	.463***	.303***	.259***	.435***	.242***	.143**	.402***
Non-intimate partner victims (n=157)	.338***	.068	.321***	.255***	.167*	.084	.259***

*p<.05. **p<.01. ***p<.001.

all samples. Consistent with the other assessment scores, the weakest correlations with the last FROST assessment were for PTR filed for a new DV offense.

ROC Curve Analysis

The results of both the crosstabulations and the bivariate correlations provide support for the predictive validity of the both the DVSI and the OST/FROST. However, another consideration in predicting outcomes is the accuracy of the prediction. True positives occur when an event is predicted to occur and it actually does. For example, in the case of domestic violence offenders, a true positive would reflect an individual who is predicted to commit a new domestic violence offense who actually does. This is also referred to as sensitivity. A true negative reflects an individual who is not predicted to commit a new domestic violence offense who, in fact, does not. This is also referred to as specificity. False positives and false negatives can also occur. A false positive occurs when a predicted outcome does not occur, also called a Type I error. A false negative occurs when an event that is not predicted, actually occurs, also called a Type II error. This is most clearly illustrated in Table 4.20.

Table 4.20

Predicted versus Actual Outcomes

	Predicted outcomes	
Actual outcomes	No	Yes
No	Specificity	Type I Error
Yes	Type II Error	Sensitivity

This is also illustrated in Table 4.21 using the DVSI risk categories and the outcome PTR filed for a new crime. The DVSI risk category of low risk

represents domestic violence offenders predicted not to commit a new offense. The DVSI risk category of high risk represents domestic violence offenders predicted to commit a new offense.

Table 4.21

Predicted versus Actual Outcomes: DVSI Risk Categories and PTR Filed for a New Crime

	DVSI risk categories	
PTR filed new crime	Low	High
No	240	74
Yes	183	76

Based upon the results in Table 4.21, there are 240 true negatives and 76 true positives. The total number of events predicted correctly is 316, out of the overall sample of 573, or 55.1%. This does not appear to be much better than chance. It could also be suggested that greater accuracy in prediction could be achieved by predicting that no one would commit a new crime. This would increase the accuracy of correct predictions to 423 out of 573, or 73.8%.

The accuracy of a predictive instrument is often characterized by the percentage of correct predictions. However, as stated earlier, this can be problematic with behaviors that have a low base rate. ROC is a strategy that is not affected by base rates or selection ratios. Due to these strengths, ROC has become a common statistical tool used to assess the predictive validity of risk assessment instruments and is used in addition to the crosstabs and correlations to determine if the DVSI and the OST/FROST predict outcomes better than chance.

The ROC compares predicted outcomes with actual outcomes. The Area Under the Curve (AUC) reflects whether or not the prediction is significantly better than chance. An AUC value of .50 represents chance prediction. In general, values of .50-.59 are considered no better than chance, 60-.69 are considered marginal improvements over chance, .70-.79 moderate improvements over chance, and .80 and higher represent large improvements. In addition to the AUC, it is also important to look at the statistical significance of the AUC. If the 95% confidence interval contains the value of .50, which is chance prediction, the AUC result will not be significant. ROC curves were generated for the DVSI, the initial OST/FROST assessment, the second FROST assessment, and the last FROST assessment with each outcome measure to determine whether the assessments predict outcomes better than chance. The analyses were run for the overall sample and for sub-groups by gender, ethnicity and victim relationship.

DVSI. The Area Under the Curve (AUC) for the total DVSI score and each probation outcome is presented in Table 4.22. For the overall sample, the AUC is statistically significant for each probation outcome. However, the AUC for PTR filed for a new crime and PTR filed for a new DV offense are below .60, indicating failure, or not better than chance. The AUC for the other outcome measures falls in the marginal category, with AUC values between .60 and .69. The highest AUC is for probation status, .666, followed by PTR filed for a violation of DV conditions, .663, and PTR filed, .656. Similar results are found for the sub-groups of males, non-Hispanics, and intimate partner victims. An

Table 4.22

Area Under the Curve (AUC) for Total DVSI Score and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=573)	.656***	.634***	.575**	.663***	.622***	.583*	.666
Males (n=487)	.660***	.633***	.578**	.660***	.620***	.579*	.681***
Females (n=86)	.620	.657*	.497	.676**	.631	.536	.493
Non-Hispanics (n=376)	.641***	.615***	.570*	.641***	.615**	.606*	.632***
Hispanics (n=197)	.686***	.669***	.586	.706***	.638*	.540	.735***
Intimate partner victims (n=421)	.663***	.656***	.568*	.653***	.618***	.552	.681***
Non-intimate partner victims (n=206)	.605**	.571	.569	.652***	.569	.577	.604*

*p<.05. **p<.01. ***p<.001.

AUC above .70, indicating moderate improvements over chance, is only found for Hispanics with an AUC of .735 for probation status and .706 for PTR filed for violation of DV conditions. The DVSI appears to predict PTR filed for a violation of DV conditions best, with significant AUC values for all subgroups, ranging from .641 for non-Hispanics, to .706 for Hispanics. The DVSI does not appear to predict new criminal behavior well. None of the AUC values for PTR filed for a new crime exceeded .60. With PTR filed for a new DV offense, the AUC value only exceeded .60 for Hispanics, with a value of .606. The DVSI also does not appear to predict well for females or non-intimate partner victims. For females, significant AUC values above .60 were only obtained for PTR filed for violation of DV conditions, .676, and PTR filed for technical violations only. For non-intimate partner victims, significant AUC values above .60 were only obtained for PTR filed for violation of DV conditions, .652, PTR filed, .605, and probation status, .604.

Initial OST/FROST. The Area Under the Curve (AUC) for the initial OST/FROST score and each probation outcome is presented in Table 4.23. For the overall sample, the AUC for the initial OST/FROST score is statistically significant, and above .60, for all probation outcomes except for PTR filed for new DV offense, indicating marginal improvements over chance. The AUC was highest for PTR filed, .682, followed by probation status, .680, and PTR filed for a violation of DV conditions, .679. The initial OST/FROST score produced statistically significant AUC values above .60 for all sub-groups for the probation

Table 4.23

Area Under the Curve (AUC) for Initial OST/FROST Score and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=573)	.682***	.615***	.626***	.679***	.639***	.573	.680***
Males (n=487)	.694***	.612***	.640***	.691***	.643***	.585*	.700***
Females (n=86)	.657*	.645*	.573	.640*	.621	.499	.595
Non-Hispanics (n=376)	.680***	.600**	.636***	.667***	.635***	.575	.656***
Hispanics (n=197)	.685***	.648**	.605*	.706***	.633*	.554	.724***
Intimate partner victims (n=421)	.699***	.652*	.618***	.693***	.643***	.570	.697***
Non-intimate partner victims (n=206)	.665***	.582	.635**	.649***	.698***	.573	.629**

*p<.05. **p<.01. ***p<.001.

outcomes of PTR filed and PTR filed for a violation of DV conditions. The AUC values for PTR filed for a new crime, PTR filed for victim contact, and probation status were significant and above .60 for all sub-groups except for females. The AUC values for PTR filed for technical violations only is significant and above .60 for all sub-groups except non-intimate partner victims. The AUC for PTR filed for a new DV offense never exceeded a value of .60. An AUC above .70, indicating moderate improvements over chance is only found for Hispanics for probation status, .724 and PTR filed for a violation of DV conditions, .706, and for males for probation status, .700.

Second FROST assessment. The second FROST assessment represents the second assessment conducted and provides the first opportunity to measure change in risk scores. Since changes in scores can occur, it is meaningful to look at subsequent risk assessments, reflecting the change in scores, to determine if the reassessments are as predictive, or potentially more predictive, than the initial assessment. The AUC for the second FROST assessment and probation outcomes is presented in Table 4.24. For the overall sample, the AUC was statistically significant and above .60, indicating a marginal improvement over chance, for each probation outcome except PTR filed for a new DV offense. The highest AUC values were for PTR filed for a violation of DV conditions, .695, followed by PTR filed, .694 and probation status, .685. The AUC was statistically significant and above .60 for each sub-group for the probation outcomes PTR filed and PTR filed for a violation of DV conditions. For PTR filed, the AUC values ranged from .652 - .723 with values above .70 for intimate partner victims,

Table 4.24

Area Under the Curve (AUC) for Second FROST Assessment and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=446)	.694***	.638***	.642***	.695***	.645***	.569	.685***
Males (n=377)	.702***	.639***	.649***	.699***	.646***	.564	.696***
Females (n=69)	.662*	.617	.633	.693*	.643	.655	.648
Non-Hispanics (n=298)	.703***	.618**	.662***	.692***	.596*	.542	.694***
Hispanics (n=148)	.663***	.666*	.595	.702***	.749***	.615	.651**
Intimate partner victims (n=333)	.723***	.680***	.648***	.728***	.680***	.584	.739***
Non-intimate partner victims (n=157)	.652***	.577	.633[c]	.614*	.586	.563	.585

*p<.05. **p<.01. ***p<.001.

.723, non-Hispanics, .703, and males, .702. The PTR filed for a violation of DV conditions, the AUC values ranged from .614 - .728 with values above .70 for intimate partner victims, .728, and Hispanics, .702. The AUC values for the second FROST were not statistically significant above .60 for any sub-groups for the outcome PTR filed for a new DV offense. Based upon the AUC values, the second FROST assessment also does not appear to predict well for females or for non-intimate partner victims. For females, the AUC was only significant and above .60 for the probation outcomes PTR filed for a violation of DV conditions, and for PTR filed. For non-intimate partner victims, the AUC was only significant and above .60 for the probation outcomes PTR filed for a violation of DV conditions, PTR filed, and PTR filed for a new crime.

Last FROST assessment. The last FROST assessment represents a second opportunity to look at changes in assessment scores from the initial assessment. It represents the assessment completed closest to termination from probation, or to the end of the data collection period. For some offenders the last FROST assessment is the same as the second FROST assessment. For others, as many as eight or nine assessments were conducted. The AUC values for the last FROST assessment and probation outcomes are presented in Table 4.25. For the overall sample, the AUC values were statistically significant for all probation outcomes. The AUC value exceeded .70 for the outcomes of probation status, .735, PTR filed, .734, and PTR filed for a violation of DV conditions, .722. The AUC values were statistically significant for all probation outcomes for the sub-groups of males, non-Hispanics, Hispanics, and intimate partner victims, with a

Table 4.25

Area Under the Curve (AUC) for Last FROST Assessment Score and Outcome Measures

Sample	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Overall sample (n=446)	.734***	.635***	.698***	.722***	.648***	.652***	.735***
Males (n=377)	.748***	.647***	.702***	.731***	.657***	.650***	.741***
Females (n=69)	.680*	.577	.717*	.692*	.603	.716	.729*
Non-Hispanics (n=298)	.737***	.607**	.717***	.712***	.610*	.646**	.742***
Hispanics (n=148)	.720***	.689**	.655**	.737***	.734***	.660*	.706***
Intimate partner victims (n=333)	.769***	.706***	.689***	.756***	.682***	.636**	.770***
Non-intimate partner victims (n=157)	.684***	.528	.711***	.635**	.600	.681*	.650**

*p<.05. **p<.01. ***p<.001.

number of AUC values exceeding .70, reflecting a moderate improvement over chance. The AUC values for PTR filed for a new DV offense and the last FROST assessment were statistically significant and above .60 for every subgroup except for females. Overall, the AUC values for the last FROST assessment and probation outcomes suggest that the last FROST assessment is more predictive of probation outcomes than either the initial OST/FROST assessment conducted, or the second FROST assessment conducted.

Combined Effect of the DVSI and the OST/FROST

The analyses provided above provide evidence that the DVSI and the OST/FROST are both predictive of the probation outcomes included in this study. However, the correlations between the DVSI and the OST/FROST also indicated that while there is a statistically significant relationship between the two assessments, the relationship is not overly strong, indicating that each instrument assesses some unique factors. Based upon the uniqueness of each assessment, it is hypothesized that the DVSI and the OST together are better predictors than either assessment alone. This hypothesis was tested using logistic regression.

Logistic regression models are created to look at the effect of each assessment alone, as well as together, on each probation outcome. Demographic variables, including gender, ethnicity (Hispanic or non-Hispanic), and age at sentence are also included in the models to control for the effects of these demographic variables on probation outcomes.

Prior to conducting the logistic regression analysis, an appropriate classification cutoff value was determined for each probation outcome. The

default value for the classification cutoff in a logistic regression model is .50. When the base rate of the dependent variable in the model is approximately 50 percent, this is an appropriate cutoff. However, when the base rate for the dependent variable being predicted by the model differs from 50 percent, the classification cutoff must be adjusted accordingly. In the current study, the base failure rate for PTR filed is approximately 50 percent, 50.4% of the overall sample had a PTR filed. However, the base rates for the other outcomes differ from 50 percent. To obtain the appropriate classification cutoff, the specified logistic regression model for the dependent variable is run. This generates the model's predicted probabilities. The appropriate classification cutoff can then be determined by looking at the frequency distribution of the predicted probabilities. The appropriate classification cutoff is the predicted probability that corresponds to the model's base success rate. The base failure rate and success rates for each probation outcome, along with the new classification cutoffs are presented in Table 4.26. These cutoffs were used in each of the successive prediction models developed.

PTR Filed

Table 4.27 provides the results of three logistic regression models for PTR filed. All three models include demographic variables. The first model includes the DVSI score, the second model includes the initial OST/FROST score, and the third model includes both the DVSI score and the initial OST/FROST score.

Table 4.26

Base Failure Rates, Success Rates, and Classification Cutoffs for Probation Outcomes

Probation outcome	Base failure rate	Base success rate	Classification cutoff
PTR filed	50.4	49.6	.50
PTR filed – technical violations only	24.3	75.7	.30
PTR filed – new crime	26.2	73.8	.33
PTR Filed – violation of DV conditions	41.1	59.9	.43
PTR filed – victim contact	18.5	81.5	.25
PTR filed – new DV offense	11.9	88.1	.17
Probation status – unsuccessful	34.2	65.8	.40

The χ^2 statistic for each model is significant, indicating that the variables included in the models provide a significant improvement over the intercept-only models. Another way to look at the models is using the Nagelkerke R^2 statistic. The Nagelkerke R^2 statistic in logistic regression is similar to the R^2 from a linear regression model. It tells the overall goodness of fit of the model, or the proportion of variance explained by the model. The overall proportion of variation explained was highest for the model of including the DVSI score and the initial OST/FROST score. This model explained 20.0% of the variance in PTR filed compared to 12.5% for the DVSI only model and 14.8% for the initial OST/FROST model. Within this model age at sentence, the total DVSI score, and the initial OST/FROST score were significant predictors of PTR filed. Gender and ethnicity were not significant predictors. Age at sentence has a negative relationship with PTR filed. For every year increase in age, there is a 97.5% (Exp(B)=.975) decrease in the likelihood of having a PTR filed. For every one

Table 4.27

Logistic Regression Model of the DVSI and Initial OST/FROST as Predictors of PTR Filed

	DVSI			Initial OST/FROST			DVSI + Initial OST/FROST		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	.178	.245	1.195	.531*	.255	1.700	.377	.259	1.459
Ethnicity – Hispanic	.183	.189	1.201	.045	.193	1.046	.034	.197	1.035
Age at sentence	-.035***	.009	.965	-.018*	.009	.982	-.026**	.010	.975
DVSI total score	.140***	.023	1.151				.114***	.023	1.121
Initial OST/FROST score				.149***	.022	1.161	.128***	.022	1.156
Constant	-.146	.388		1.449**	.469		-1.742***	.483	
-2 Log Likelihood		737.895			726.844			700.932	
χ^2		56.408***			67.459***			93.371***	
Nagelkerke R^2		.125			.148			.200	

*p<.05. **p<.01. ***p<.001.

point increase in DVSI score, there is a 12.1% (Exp(B)=1.121) increase in the likelihood of having a PTR filed, and for every one point increase in the initial OST/FROST score there is a 15.6% (Exp(B)=1.156) increase in the likelihood of having a PTR filed.

PTR Filed for Technical Violations Only

Table 4.28 provides the results of three logistic regression models for PTR filed for technical violations only. The χ^2 statistic for each model is significant, indicating that each model is an improvement over the intercept-only models. As with the models for PTR filed, the model that includes both the DVSI score and the initial OST/FROST score explained the greatest amount of variation in PTR filed for technical violations only. However, the amount of variation explained is small, 7.6%. Within this model only the DVSI score and the initial OST/FROST score are significant. For every one point increase in DVSI score there is a 9.1% (Exp(B) = 1.091) increase in the likelihood of having a PTR filed for technical violations. For every one point increase in the initial OST/FROST score there is a 6.9% (Exp(B) – 1.069) increase in the likelihood of having a PTR filed for technical violations.

PTR Filed for New Crime

The results of three logistic regression models for PTR filed for a new crime are presented in Table 4.29. The χ^2 statistic for each model is significant. The Nagelkerke R^2 value is greatest for the model including both the DVSI score and the initial OST/FROST score. This model explains 10.0% of the variation in PTR filed for a new crime compared to 6.9% for the DVSI score only model and

Table 4.28

Logistic Regression Model of the DVSI and Initial OST/FROST as Predictors of PTR Filed for Technical Violations Only

	DVSI			Initial OST/FROST			DVSI + Initial OST/FROST		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	-.215	.277	.806	.040	.277	1.041	-.109	.282	.896
Ethnicity – Hispanic	.111	.218	1.117	.050	.218	1.052	.034	.220	1.035
Age at sentence	-.002	.010	.998	.009	.010	1.009	.005	.010	1.005
DVSI total score	.101***	.023	1.106				.087***	.024	1.091
Initial OST/FROST score				.083***	.021	1.087	.067**	.022	1.069
Constant	-1.781***	.443		-2.420***	.524		-2.667***	.540	
-2 Log Likelihood	614.259			618.707			604.951		
χ^2	20.670***			16.222**			29.978***		
Nagelkerke R^2	.053			.042			.076		

*p<.05. **p<.01. ***p<.001.

Table 4.29

Logistic Regression Model of the DVSI and Initial OST/FROST as Predictors of PTR Filed New Crime

	DVSI			Initial OST/FROST			DVSI + Initial OST/FROST		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	.434	.302	1.544	.653	.307	1.921	.578	.310	1.782
Ethnicity – Hispanic	.114	.208	1.121	.029	.211	1.019	.015	.212	1.015
Age at sentence	-.045***	.011	.956	-.033***	.011	.967	-.037***	.011	.964
DVSI total score	.064**	.022	1.066				.047	.023	1.048
Initial OST/FROST score				.087***	.021	1.091	.078***	.022	1.081
Constant	-.579	.456		-1.529**	.542		-1.618**	.547	
-2 Log Likelihood		631.354			622.521			618.367	
χ^2		27.493***			36.327***			40.481***	
Nagelkerke R^2		.069			.090			.100	

*p<.05. **p<.01. ***p<.001.

9.0% for the model including only the initial OST/FROST score. Age at sentence and the initial OST/FROST score were significant predictors within this model. Age at sentence has a negative relationship. For every year increase in age, there is a 96.4% (Exp(B)=.964) decrease in the likelihood of having a PTR filed for a new crime. For every one point increase in the initial OST/FROST score, there is an 8.1% (Exp(B)=1.081) increase in the likelihood of having a PTR filed for a new crime.

PTR Filed for Violation of DV Conditions

Table 4.30 presents the results of three logistic regression models for PTR filed for a violation of DV conditions. The pattern of results is similar to the other probation outcome measures. The χ^2 statistic for each model is significant. The Nagelkerke R^2 value is greatest for the model including both the DVSI score and the initial OST/FROST score. This model explains 19.2% of the variation in PTR filed for a violation of DV conditions compared to 13.0% for the DVSI score only model and 13.1% for the initial OST/FROST model only. Within this model, gender and ethnicity are not significant predictors. Age at sentence has a negative relationship with PTR filed for a violation of DV conditions. For every one year increase in age, there is a 97.3% (Exp(B)=.973) decrease in the likelihood of PTR filed for a violation of DV conditions. Both the DVSI score and the initial OST/FROST score were also significant predictors in the model. For every one point increase in DVSI score, there is a 12.8% (Exp(B)=1.128) increase in the likelihood of a PTR filed for a violation of DV conditions. For every one point

Table 4.30

Logistic Regression Model of the DVSI and Initial OST/FROST as Predictors of PTR Filed Violation of DV Conditions

	DVSI			Initial OST/FROST			DVSI + Initial OST/FROST		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	.229	.257	1.258	.598 *	.266	1.818	.426	.271	1.530
Ethnicity – Hispanic	.071	.193	1.074	-051	.195	.950	-.071	.200	.931
Age at sentence	-.037 ***	.010	.964	-.019 *	.009	.981	-.027 **	.010	.973
DVSI total score	.142 ***	.011	1.153				.121 ***	.023	1.128
Initial OST/FROST score				.134 ***	.021	1.144	.114 ***	.022	1.121
Constant	-.554	.403		-1.788 ***	.483		-2.013 ***	.501	
-2 Log Likelihood		713.782			713.255			683.872	
χ^2		58.134 ***			58.661 ***			88.043 ***	
Nagelkerke R^2		.130			.131			.192	

*p<.05. **p<.01. ***p<.001.

increase in initial OST/FROST score, there is a 12.1% (Exp(B)=1.121) increase in the likelihood of a PTR filed for a violation of DV conditions.

PTR Filed for Victim Contact

Table 4.31 provides the results of three logistic regression models for PTR filed for victim contact. As with the other probation outcome measures, the χ^2 statistic for each model is significant and the Nagelkerke R^2 value is greatest for the model including both the DVSI score and the initial OST/FROST score. This model explained 7.4% of the variation in PTR filed for victim contact compared with 3.7% for the DVSI score only model and 5.8% for the initial OST/FROST score only model. Gender, ethnicity and age at sentence were not significant predictors. Both the DVSI score and the initial OST/FROST score were significant predictors. For every one point increase in the DVSI score there is a 6.4% (Exp(B)=1.064) increase in the likelihood of having a PTR filed for victim contact. For every one point increase in the initial OST/FROST score there is a 9.1% (Exp(B)=1.091) increase in the likelihood of having a PTR filed for victim contact.

PTR Filed for New DV Offense

Table 4.32 presents the results for three logistic regression models for PTR filed for a new DV offense. The χ^2 statistic was only significant for two of the models, the model that included the DVSI score only and the model that included both the DVSI score and the initial OST/FROST score. It was not significant for the model that included the initial OST/FROST score only, indicating that this model did not provide a significant improvement over the intercept-only model.

Table 4.31

Logistic Regression Model of the DVSI and Initial OST/FROST as Predictors of PTR Filed Victim Contact

	DVSI			Initial OST/FROST			DVSI + Initial OST/FROST		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	.107	.321	1.113	.363	.324	1.437	.260	.329	1.296
Ethnicity – Hispanic	.313	.243	1.368	.226	.245	1.254	.217	.246	1.242
Age at sentence	-.011	.011	.989	.001	.011	1.001	-.003	.011	.997
DVSI total score	.080***	.024	1.083				.062**	.025	1.064
Initial OST/FROST score				.098***	.023	1.103	.087***	.024	1.09
Constant	-2.055***	.500		-3.085***	.601		-3.250***	.613	
-2 Log Likelihood		535.428			527.936			522.074	
χ^2		13.366*			20.858***			26.721***	
Nagelkerke R^2		.037			.058			.074	

*p<.05. **p<.01. ***p<.001.

Table 4.32

Logistic Regression Model of the DVSI and Initial OST/FROST as Predictors of PTR Filed New DV Offense

	DVSI			Initial OST/FROST			DVSI + Initial OST/FROST		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	.813	.485	2.254	.960 *	.485	2.613	.880	.488	2.410
Ethnicity – Hispanic	.126	.281	1.135	.084	.282	1.087	.079	.283	1.082
Age at Sentence	-.018	.014	.982	-.012	.014	.989	-.014	.014	.986
DVSI Total Score	.056 *	.029	1.058				.048	.029	1.049
Initial OST/FROST Score				.048	.027	1.049	.028	.028	1.039
Constant	-2.669 ***	.664		03.076 ***	.763		-3.183	.771	
-2 Log Likelihood		407.961			408.739			406.154	
χ^2		9.496 *			8.719			11.304 *	
Nagelkerke R^2		.032			.029			.038	

*p<.05. **p<.01. ***p<.001.

None of the models explained much of the variation in PTR filed for a new DV offense. The model that combined the DVSI score and the initial OST/FROST score explained the most variation at 3.8%. However, none of the predictors in the model were significant.

PTR Filed for Unsuccessful Probation Status

Table 4.33 presents three logistic regression models for an unsuccessful probation status. The χ^2 statistic for each model is significant. The Nagelkerke R^2 value is greatest for the model including both the DVSI score and the initial OST/FROST score. It is the highest R^2 value obtained for any of the probation outcomes with 20.1% of the variation in unsuccessful probation status explained by the model. Each of the variables in the model is a significant predictor. Being female (Exp(B)=2.027). Being Hispanic increases the likelihood of having an unsuccessful probation status by .4% (Exp(B)=1.004). Age at sentence had a negative relationship with unsuccessful probation status. For every one year increase in age, there is a 97% (Exp(B)=.970) decrease in the likelihood of having an unsuccessful probation status. For every one point increase in the DVSI score, there is a 12.8% (Exp(B)=1.128) increase in the likelihood of having an unsuccessful probation status. Finally, for every one point increase in the initial OST/FROST score, there is a 12.2% (Exp(B)=1.122) increase in the likelihood of having an unsuccessful probation status.

Table 4.33

Logistic Regression Model of the DVSI and Initial OST/FROST as Predictors of Unsuccessful Probation Status

	DVSI			Initial OST/FROST			DVSI + Initial OST/FROST		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	.477	.282	1.612	.882 **	.292	2.416	.706 **	.298	2.027
Ethnicity – Hispanic	.145	.200	1.156	.023	.201	1.023	.004 **	.207	1.004
Age at sentence	-.040	.010	.961	-.022 **	.010	.979	-.030 ***	.010	.970
DVSI total score	.141 ***	.023	1.152				.121 ***	.023	1.128
Initial OST/FROST score				.135 ***	.021	1.144	.115 ***	.022	1.122
Constant	-.988 *	.429		-2.235 ***	.516		-2.534 ***	.536	
-2 Log Likelihood		675.531			674.640			646.142	
χ^2		60.650 ***			61.542 ***			90.039 ***	
Nagelkerke R^2		.139			.141			.201	

*p<.05. **p<.01. ***p<.001.

ROC Analysis for the DVSI and Initial OST/FROST Combined

Another way to assess the strength of the assessments in predicting outcomes is by using the ROC curve. The ROC curve can be calculated using the results from the logistic regression models created above. The predicted probabilities for each regression model were saved to be used to generate an ROC curve. For each probation outcome, the ROC curve was calculated using the predicted probabilities for each regression model that included the demographic variables, along with the DVSI score only, the initial OST/FROST score only, and both the DVSI and initial OST/FROST scores.

Table 4.34 presents the results of the ROC analysis by identifying the Area Under the Curve (AUC). For each outcome, the AUC was significant and above .60, indicating the models predicted marginally better than chance. However, for each probation outcome, the AUC was highest for the models that included both the DVSI score and the initial OST/FROST score. For three outcomes, the AUC was above .70, indicating a moderate improvement over chance. These three outcomes include PTR filed, .723, PTR filed for a violation of DV conditions, .722, and unsuccessful probation status, .731.

Table 4.34

Area Under the Curve (AUC) for Logistic Regression Models of Probation Outcomes

Assessment	PTR Filed	PTR Filed – Technical Violations Only	PTR Filed – New Crime	PTR Filed – Violation of DV Conditions	PTR Filed – Victim Contact	PTR Filed – New DV Offense	PTR Filed – Unsuccessful Probation Status
DVSI	.677***	.635***	.647***	.678***	.627***	.620***	.691***
Initial OST/FROST	.695***	.617***	.663***	.691***	.642***	.620***	.691***
DVSI+Initial OST/FROST	.723***	.659***	.667***	.722***	.665***	.631***	.731***

*p<.05. **p<.01. ***p<.001.

Conclusion

Support is found for each of the hypotheses tested in this chapter. There is a moderate relationship between the DVSI and the OST/FROST. While initially it appears to be a significant relationship, the strength of the relationship is based upon the three items that are in common between the two assessments. When those items are removed, the relationship between the two assessments is almost non-existent, r = -.004. The DVSI and the OST/FROST contain unique risk factors and assess risk differently.

It was also hypothesized that the DVSI and the OST/FROST would be predictive of general probation outcomes and domestic violence specific probation outcomes. The predictive validity of the instruments was assessed multiple ways including crosstabulations, bivariate correlations, and the ROC curve. The results are consistent, regardless which method of analysis is used. Each of the analyses provides support for the ability of the DVSI and the OST/FROST to predict probation outcomes.

Although there is consistency in the findings, there is variation in the results across risk assessment instruments, outcomes, and sub-groups of the sample. In general, the crosstabulations indicate that individuals assessed as high risk on the DVSI or on the OST/FROST failed at higher rates than those assessed as low risk. The differences in failure rates across the OST/FROST risk categories are significant for all of the probation outcomes. The differences in failure rates for the risk categories of the DVSI are not significant for outcomes related to new criminal behavior, which include PTR for a new crime and PTR for

a new DV offense. Overall, the risk categories of the OST/FROST performed better than the risk categories of the DVSI. However, the OST/FROST categories do not distinguish failure well for females. The risk categories of the DVSI do not distinguish failure well for the outcomes related to new criminal behavior for any of the sub-groups in the sample. The DVSI categories also do distinguish failure rates well for females and offenders with non-intimate partner victims.

A similar pattern of results is found with the bivariate correlations. The DVSI and the OST/FROST are both significantly related to each of the probation outcomes in the study. However, the correlations are stronger between the OST/FROST and probation outcomes than the DVSI. For the DVSI, the correlations ranged from .097 for PTR for a new DV offense to .268 for PTR filed for a violation of DV conditions and unsuccessful probation status. The correlations for the OST/FROST ranged from .087 for PTR for a new DV offense to .310 for PTR filed. As with the crosstabulations, the DVSI was not significantly correlated with probation outcomes for females or for non-intimate partner victims. The OST/FROST tended to not correlate with probation outcomes for females or for PTR filed for a new DV offense.

Correlations were also assessed for subsequent assessments including the second assessment conducted, which is the first reassessment, and the last assessment conducted. Subsequent assessments are more highly correlated with probation outcomes than the initial assessment, demonstrating the ability of subsequent reassessments to predict outcomes. The second assessment was not significantly correlated with PTR for a new DV offense. However, the

correlations with other outcomes were stronger ranging from .181 for victim contact to .345 for PTR filed. Correlations still were not significant or strong with females or non-intimate partner victims. The last assessment has the strongest correlations with probation outcomes ranging from .156 for PTR filed for a new DV offense to .410 for PTR filed. The correlations are also stronger for females.

These results are mirrored again using the ROC curve. The AUC is significant for all probation outcomes, although some of the values are not considered an improvement over chance. The AUC values range from .575 for PTR for a new crime to .666 for unsuccessful probation status. The AUC for the initial OST/FROST is not significant for PTR filed for a new DV offense but the values are higher for the other outcomes ranging from .615 for PTR filed for technical violations to .682 for PTR filed. Subsequent assessments provided even stronger AUC values, indicating an even greater ability to predict outcomes better than chance. The AUC values for the last assessment ranged from .635 for PTR filed for technical violations to .735 for unsuccessful probation status.

Overall, both the DVSI and the OST/FROST are predictive of probation outcomes. The OST/FROST appears to be more predictive than the DVSI. The instruments do not predict new criminal behavior, especially new domestic violence offenses, as well as other probation outcomes. The instruments also perform less well for females and offenders with non-intimate partner victims.

The final hypothesis tested is whether the DVSI and the OST/FROST together are better predictors than either assessment alone. This was tested through both logistic regression and the ROC curve. The DVSI and the

OST/FROST are found to be significant predictors of probation outcomes in the logistic regression models created. For each assessment, as the assessment score increases, so does the likelihood of failure, or a negative probation outcome. The models that included both the DVSI and the OST/FROST explained more of the variation in the outcome measure, as measured by Nagelkerke's R^2, than either assessment alone. The amount of variation explained ranged from 3.8% for PTR filed for a new DV offense to 20.1% for an unsuccessful probation outcome. Finally, the AUC for the combined models is higher than for either assessment alone ranging from .631 for PTR filed for a new DV offense to .731 for unsuccessful probation outcome.

This chapter addressed the predictive validity of the existing risk assessment instruments used by the Maricopa County Adult Probation Department with domestic violence offenders. The next chapter will identify which factors are the most significant predictors of probation outcomes for domestic violence offenders.

Chapter 5

PREDICTION MODELS OF PROBATION OUTCOMES

The previous chapter provides support for the ability of the risk assessment instruments currently in use by the Maricopa County Adult Probation Department, the DVSI and the OST/FROST, to predict probation outcomes for domestic violence offenders. However, our understanding of what risk factors make the most significant contribution to predicting probation outcomes is enhanced by creating prediction models. This chapter will describe the logistic regression models developed to determine which factors are the strongest predictors of probation outcomes for domestic violence offenders.

Bivariate Correlations

Prior to creating the logistic regression models the bivariate correlations between each potential predictor variable and each probation outcome were obtained to determine which predictors have a statistically significant relationship to probation outcomes.

Demographic Variables

Few significant relationships are found between the demographic variables and probation outcomes, as can be seen in Table 5.1. Ethnicity, either Hispanic or non-Hispanic, is not significantly related to any of the outcome measures. Gender is only significantly related to probation status, with a correlation of -.097, indicating that females are less likely to have an unsuccessful probation status than males. Being married is significantly related to four outcomes, including PTR filed, PTR filed for technical violations only, PTR filed for violation of DV

conditions and probation status. Each of the correlations is negative, indicating that married individuals are less likely to have a negative outcome. The strongest correlation is for PTR filed with a value of -.171. Age at sentence is also significantly related to four outcomes including PTR filed, PTR filed for a new crime, PTR filed for violation of DV conditions and probation status. The strongest correlation is -.160 for PTR filed for a new crime and all correlations are in a negative direction, indicating that as one gets older, the likelihood of a negative outcome decreases.

Criminal History

Table 5.1 displays the correlations between the criminal history variables and probation outcomes. Each of the criminal history variables is significantly correlated with the probation outcome measures. The variable with the strongest correlations is three or more prior juvenile adjudications or adult convictions, which is significantly related to all of the outcome measures. The highest value is a correlation of .237 with probation status and .219 with PTR filed. A prior probation or parole revocation is significantly related to all outcomes except for PTR filed for a new DV offense. The probation outcomes with the fewest criminal history variables significantly correlated are PTR filed for victim contact and PTR filed for a new DV offense. For each of the criminal history measures, having a criminal history increased the likelihood of a negative probation outcome. In other words, being younger than 17 at the time of first arrest, having three or more prior juvenile adjudications or adult convictions, having a prior

Table 5.1

Correlations Between Demographic and Criminal History Variables with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Demographics							
Gender (Female)	-.053	.013	-.072	-.065	-.024	-.079	-.097*
Hispanic	-.017	-.032	.012	.007	-.052	-.004	-.003
Married	-.171***	-.125**	-.073	-.154***	-.074	.053	-.113**
Age at Sentence	-.130**	.012	-.160*	-.132**	-.022	-.047	-.136***
Criminal History							
< 17 @ first arrest	.156***	.021	.156***	.123**	.007	.099*	.155***
3 or more prior adjudications/ convictions	.219***	.154***	.099*	.178***	.103*	.119**	.237***
Prior felony offense	.122***	.052	.088*	.105*	.031	.032	.162***
Prior revocations	.181***	.087*	.121**	.145***	.091*	.026	.193***
Prior violent convictions	.121**	.117***	.024	.123**	.048	.013	.134***

*p<.05. **p<.01. ***p<.001.

felony offense, having prior probation or parole revocations, and having prior violent convictions all increased the likelihood of a negative outcome.

Current Offense

The correlations between current offense variables and probation outcomes are presented in Table 5.2. Being on probation for a felony offense has the strongest correlation with any of the outcome measures with a value of .154 with probation status. It is also significantly related to PTR filed and PTR filed for violation of DV conditions. Being on probation for multiple offenses is significantly correlated with PTR filed, PTR filed for a new crime and PTR filed for violation of DV conditions. Being on probation for domestic violence offenses only has a negative relationship with the outcome measures. This indicates that if an individual is only on probation for a domestic violence offense, they are less likely to experience a negative outcome, compared to those who are on probation for offenses in addition to domestic violence offenses. This variable is significantly related to PTR filed, PTR filed for technical violations, PTR filed for violation of DV conditions and probation status. Spending time in jail or prison before being released to the community is only significantly related to PTR filed for technical violations and probation status. Finally, the number of days spent in custody before release was the only current offense variable significantly related to PTR filed for a new DV offense. It was also significantly related to probation status. No current offense variables were significantly related to PTR filed for victim contact.

Table 5.2

Correlations Between Current Offense Variables with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation Status
Current 0ffense							
Felony Offense	.138***	.080	.079	.089*	.036	.024	.154***
Multiple Offenses	.132**	.040	.110**	.121**	.071	.044	.071
DV Offense Only	-.142***	-.109**	-.055	-.125*	-.059	.037	-.121**
Drugs/Alcohol @ Time of Offense	.065	.080	-.004	.041	.042	-.015	.042
Initial Jail or Prison	.072	.096*	-.012	.020	.000	.031	.146***
# of Days in Custody	.048	-.006	.060	-.026	-.005	.089*	.108**

*p<.05. **p<.01. ***p<.001.

Victim Characteristics

Table 5.3 presents the correlations between victim characteristics and probation outcomes. Having a victim that was a juvenile is the victim characteristic most associated with probation outcomes. It is significantly related to each of the probation outcomes except for those related to new criminal behavior, PTR filed for a new crime and PTR filed for a new DV offense. The strongest correlation is for PTR filed for victim contact, -.130. There is a negative relationship between having a juvenile victim and probation outcomes, indicating that if there is a juvenile victim, the individual is less likely to have a negative probation outcome. Having a female victim and whether or not the victim and offender were living together at the time of the current offense are not significantly related to any of the probation outcomes. Each of the other victim characteristics, which include having multiple victims, a male victim, an adult victim, an intimate partner victim, or non-intimate partner victims, were associated with one probation outcome. None of the victim characteristics were significantly related to PTR filed for a new crime or PTR filed for a new DV offense.

Supervision Variables

Correlations with variables related to the supervision an individual received while on probation are presented in Table 5.4. Whether an individual spent time in custody during the course of supervision is the supervision variable most strongly correlated with probation outcomes. It is significantly related to each of the probation outcome measures. The strongest correlation is with PTR

Table 5.3

Correlations Between Victim Characteristic Variables with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Victim Characteristics							
Multiple victims	-.037	-.089 *	.046	-.042	.015	.034	-.072
Male victim	-.040	-.053	.006	-.059	-.026	-.010	-.092 *
Female victim	.031	.027	.009	.063	.047	-.014	.076
Adult victim	.072	.036	.047	.063	.123 **	.033	.062
Juvenile victim	-.122 **	-.085 *	-.056	-.112 **	-.130 **	-.025	-.113 **
Intimate partner victim	-.054	-.036	-.026	-.001	.091 *	.007	-.086 *
Non-intimate partner victim	.001	-.017	.017	-.057	-.095 *	.006	.012
Victim & offender live together	-.038	-.040	.004	-.033	.016	.006	-.032

*p<.05. **p<.01. ***p<.001.

Table 5.4

Correlations Between Supervision Variables with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Specialized DV caseload	.236***	.231***	.043	.248***	.182***	.035	.208***
Change in caseload	.170***	.081*	.114**	.135***	.045	.087*	.117**
Days in initial assignment	-.093*	-.153***	.043	-.069	-.072	-.022	-.291***
Contacts							
Total # Contacts	.076	-.011	.097*	.081	.050	.086*	-.169***
# Face to Face Contacts	.060	-.014	.083*	.068	.043	.079	-.164***
# Victim Contacts	.110**	.018	.108**	.101*	.183***	.116**	.006
Average Contacts per month	.114**	.060	.071	.113***	.141***	.077	.028

*p<.05. **p<.01. ***p<.001.

filed, .396, followed by PTR filed for violation of DV conditions, .379. Individuals who spend time in custody during supervision are more likely to have negative probation outcomes. The initial caseload assignment, being assigned to the specialized domestic violence caseload, is significantly related to each of the outcomes except for those related to new criminal behavior. The strongest correlation is for PTR filed for violation of DV conditions, .248, followed by PTR filed, .236. Those initially assigned to the specialized domestic violence caseloads have an increased likelihood of negative probation outcomes. Over the course of supervision the individual may also be assigned to different caseloads. The change in supervision could be neutral, such as moving from one standard probation officer to another, it could represent an increase in supervision, such as from standard probation to IPS, or it could represent a decrease in supervision, such as from a specialized domestic violence caseload to standard probation. Change in caseload assignment was significantly related to each of the probation outcomes except for PTR filed for victim contact. The number of days spent in the initial assignment was significantly correlated to PTR filed, PTR filed for technical violations and probation status. The relationship was negative indicating that the more days spent in the initial assignment, without changing types of supervision, the less likely to have a negative probation outcome.

The relationship between contact variables and probation outcomes was also assessed. None of the contact variables are significantly related to PTR filed for technical violations only. The number of victim contacts is significantly correlated with each probation outcome except PTR filed for technical violations

only and probation status. The strongest correlation is with PTR filed for victim contact, .183. The total number of contacts, and the total number of face-to-face contacts are both significantly related to PTR filed for a new crime and probation status. The relationship is positive for PTR filed for a new crime, indicating that the more contact with the probationer, the more likely to have a PTR filed for a new crime. The relationship with probation status is negative, indicating that more contacts with the probationer decreases the likelihood of an unsuccessful probation status.

DVSI Variables

The relationship between the DVSI score, risk categories and individual items are presented in Table 5.5. The total DVSI score is significantly related to each of the probation outcomes in a positive direction, indicating that the higher the DVSI score, the greater likelihood of a negative probation outcome. The strongest correlation is for PTR filed for violation of DV conditions and probation status, .268. The DVSI risk categories, whether they are based on total score or the calculated percentage, are significantly related to each probation outcome except for those related to new criminal behavior.

The individual DVSI item with the strongest relationship to probation outcomes is whether or not the individual is unemployed. This item is related to each probation outcome except for PTR filed for a new DV offense. The strongest correlation is with probation status, .323, followed by PTR filed, .318, and PTR filed for DV conditions, .292. The probation outcome with the most

Table 5.5

Correlations Between DVSI with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
DVSI score	.260***	.188***	.112**	.268***	.141***	.088*	.268***
DVSI risk level (by score)	.213***	.181***	.065	.208***	.127**	.057	.217***
DVSI risk level (by %)	.205***	.165***	.072	.194***	.116***	.074	.216***
DVSI items							
Prior non-DV convictions	.137***	.090**	.069	.151***	.087*	.077	.136***
Prior arrests assault, menacing, harassing	.137***	.067	.091*	.161***	.058	.101*	.098*
Prior DV treatment	.015	.056	-.037	.038	.090*	-.034	-.011
Prior drug/alcohol treatment	.110**	.129***	.000	.108**	.136***	-.011	.069
History of orders of Protection	.069	.065	.015	.091*	.032	.043	.107*
History violating orders of protection	.133***	.133***	.022	.143***	.056	.070	.122**

*p<.05. **p<.01. ***p<.001.

Table 5.5 cont'd

Correlations Between DVSI with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
DVSI items							
Weapon used in Crime	.053	.039	.022	-.005	-.038	-.056	.044
Children present during DV incident	-.031	.029	-.063	.007	-.044	-.049	.013
Unemployed	.318***	.202***	.164***	.292***	.127**	.064	.323***
Victim separated from offender in past six months	.096*	.014	.096*	.130**	.084*	.043	.070
Victim had restraining order at time of offense	.105**	.111**	.011	.118**	.027	.035	.102*
Offender on community supervision at time of offense	.134***	.034	.119**	.133***	.146***	.127**	.156***

*p<.05. **p<.01. ***p<.001.

DVSI items significantly correlated to it is PTR filed for violation of DV conditions, as nine DVSI items have a significant relationship to the DVSI item. This is followed by PTR filed, with eight DVSI items significantly correlated and probation status, with seven DVSI items significantly correlated. PTR filed for a new DV offense was only significantly related to two DVSI item. The DVIS items of object used as a weapon in the commission of the crime and children present during the domestic violence incident were not significantly related to any of the outcome measures.

Initial OST/FROST Variables

Table 5.6 presents the correlations between the initial OST/FROST variables and probation outcomes. The initial OST/FROST score is significantly related to each of the probation outcomes except for PTR filed for a new DV offense. The strongest relationship is with PTR filed, .310, followed by PTR filed for violation of DV conditions, .286, and probation status, .282. Similar results are seen when looking at the static item total from the OST/FROST and the dynamic item total from the OST/FROST. With the exception of the outcome PTR filed for a new crime, the correlation between the dynamic item total is higher than the static item total for each outcome measure.

Of the ten categories in the OST/FROST, three of them were not significantly related to any of the probation outcome measures. These include the categories of Physical Health/Medical, Alcohol, and Mental Health. The Vocational/Financial and Education categories were significantly correlated with

Table 5.6

Correlations Between Initial OST/FROST with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Initial OST/FROST score	.310***	.165***	.192***	.286***	.185***	.074	.282***
Risk categories (2006 cutoff Scores)	.323***	.185***	.187***	.297***	.174***	.066	.280***
Risk categories (2009 cutoff Scores)	.339***	.171***	.219***	.309***	.197***	.127**	.305***
Static item total	.243***	.102*	.177***	.235***	.154***	.052	.219***
Dynamic item total	.282***	.169***	.155***	.252***	.162***	.071	.257***
OST/FROST category scores							
Physical health/ medical	.029	-.003	.036	.007	.027	.063	.033
Vocational/financial	.274***	.111**	.203***	.252***	.130**	.065	.241***
Education	.166***	.088*	.103*	.165***	.095*	.029	.150***
Family & social relationships	.155***	.141***	.038	.148***	.060	-.003	.197***
Residence & neighborhood	.138***	.080	.078	.086*	.089*	.026	.148***
Alcohol	.033	.035	.004	.005	.038	.015	.016

*p<.05. **p<.01. ***p<.001.

Table 5.6 cont'd

Correlations Between Initial OST/FROST with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
OST/FROST category scores							
Drug abuse	.252***	.131**	.159***	.233***	.172***	.043	.202***
Mental health	.054	.024	.038	.045	.073	.028	-.039
Attitude	.083*	.049	.047	.097*	.037	-.006	.054
Criminal behavior	.162***	.054	.131**	.155***	.112**	.089*	.178***

*p<.05. **p<.01. ***p<.001.

all probation outcomes except for PTR filed for a new DV offense. The Vocational/Financial category, which is a dynamic category on the OST/FROST had the strongest correlations with probation outcomes out of any category in the OST/FROST with correlation of .274 for PTR filed, .252 for PTR filed for violation of DV conditions, and .241 for probation status. All of the significant correlations are in the positive direction, indicating that as the category score increases, so does the likelihood of a negative probation outcome. The Criminal Behavior category was significantly related to every probation outcome except for PTR filed for technical violations only. It was also the only category that was significantly related to the outcome PTR filed for a new DV offense.

Reassessment and Change Variables

Reassessments, using the FROST, are conducted every six months for individuals on supervised probation. This provides the opportunity to determine if subsequent assessments remain significantly correlated to outcome measures and to assess change in risk, or risk reduction. These results are presented in Table 5.7. Of the 573 individuals in the overall sample, 446 had a second assessment conducted. As with the initial OST/FROST score, the second assessment score was significantly correlated with each probation outcome except for PTR filed for a new DV offense. The correlations were stronger than the initial OST/FROST correlations for each outcome except for PTR filed for victim contact. The strongest correlations were for PTR filed, .345, followed by PTR filed for violation of DV conditions, .336, and probation status, .292. Correlations between the score of the last assessment conducted and probation outcomes were

Table 5.7

Correlations Between Reassessments and Change Variables with Outcome Measures

Variable	PTR filed	PTR filed technical violations only	PTR filed new crime	PTR filed violation DV conditions	PTR filed victim contact	PTR filed new DV offense	Unsuccessful probation status
Second FROST assessment score	.345***	.188***	.226***	.336***	.181***	.083	.292***
Decrease in FROST score from first to second assessment	-.148**	-.141**	-.041	-.155***	-.077	.025	-.076
Change in score from first to second assessment	-.105***	-.081	-.047	-.124**	-.044	.006	-.113*
Last FROST assessment score	.410***	.204***	.286***	.381***	.171***	.167***	.368***
Decrease in FROST score from first assessment to last assessment	-.183***	-.096*	-.123**	-.204***	-.109*	-.079	-.169***
Change in score from first to last assessment	-.187***	-.101*	-.122**	-.181***	-.040	-.093	-.202***

*p<.05. **p<.01. ***p<.001.

also assessed. Of the 446 individuals with multiple assessments, 323 had more than two assessments. The last FROST score was significantly correlated with each probation outcome and represent the strongest correlations between assessment scores and outcomes. The strongest correlation was .410 for PTR filed followed by .381 for PTR filed for violation of DV conditions.

A decrease in FROST scores from the initial assessment to the second assessment is negatively correlated with PTR filed, PTR filed for technical violations only and PTR filed for a violation of DV conditions. This indicates that individuals who have a decrease in their FROST score are less likely to experience negative probation outcomes. A decrease in assessment scores from the initial assessment to the last assessment is also negative correlated with probation outcomes. This is only not significantly correlated with PTR filed for new DV offense. Finally, both the amount of change in score from the initial assessment to the second assessment, and the initial assessment to the last assessment is significantly correlated in a negative direction with some of the probation outcomes. This indicates that as the amount of change in assessment scores goes up, the likelihood of a negative outcome goes down. These variables were significantly related to PTR filed, PTR filed for a new crime, PTR filed for violation of DV conditions and probation status. The change in score from the first assessment to the last assessment was also significantly correlated with PTR filed for technical violations of probation only. The correlations for the amount of change from the initial assessment to the last assessment were stronger than those for the amount of change from the initial assessment to the second assessment.

Summary

Overall, there are a number of variables that are significantly related to each of the probation outcomes. The strongest correlations were found among the assessment variables of the OST/FROST and the DVSI, with dynamic variables tending to produce stronger correlations than the static variables. The supervision variables and the criminal history variables also produced significant correlations across probation outcomes. The demographic variables, current offense variables and victim characteristics were less likely to be significantly correlated with outcomes. Finally, the probation outcomes of PTR filed and probation status had the most variables significantly correlated with them. There were fewer variables significantly correlated with the new criminal behavior outcomes of PTR filed for a new crime and PTR filed for a new DV offense.

Logistic Regression Models

Logistic regression models are created using those variables significantly correlated with the probation outcome measures to determine which variables are the strongest predictors for each outcome. Four models are initially created for each outcome measure. Model 1 includes primarily static variables including demographics, criminal history and current offense variables. Model 2 includes variables related to supervision. Model 3 includes variables from the DVSI and Model 4 includes OST/FROST variables. All variables that were significantly related to any outcome measure were selected for inclusion in the models. Following the creation of these four logistic regression models for each probation outcome, a fifth model is created for each probation outcome that contains only

those variables that are significant to that outcome. This will determine which variables are the most significant predictors of each outcome for individuals on probation for a domestic violence offense.

Model 1

Model 1 includes variables related to demographics, criminal history, current offense and victim characteristics. There are 19 variables significantly related to one or more probation outcomes. They include: 1) gender; 2) marital status; 3) age at sentence; 4) < 17 at the time of first arrest; 5) three or more prior juvenile adjudications or adult convictions; 6) prior felony conviction; 7) prior probation or parole revocations; 8) prior violent conviction; 9) current felony offense; 10) on probation for multiple offenses; 11) on probation for domestic violence offense only; 12) initial jail or prison before release to the community; 13) number of days in custody before release to the community; 14) multiple victims; 15) male victim; 16) adult victim; 17) juvenile victim; 18) intimate partner victim; and 19) non-intimate partner victim.

Prior to entering the variables into the logistic regression model, the bivariate correlations between each variable were reviewed to determine if any of the variables are significantly related to each other. If the variables are highly related, reflecting multicollinearity, the coefficients produced by the logistic regression equation will be biased. A standard of .70 and above was used to identify variables that are highly correlated. If the correlation between two variables exceeded .70, one of the variables was dropped from the model. There were three variables with correlations above .70. Two of the correlations are

between the victim variables. The high degree of correlation among these variables is likely do to the fact that the victim variables are not mutually exclusive. In other words, an individual in the sample may have both an adult victim and a juvenile victim, or an intimate partner victim and a non-intimate partner victim. The correlation between adult victim and juvenile victim was .795. Adult victim was dropped from the model as it was only significantly correlated with one probation outcome and juvenile victim was correlated with five probation outcomes. Intimate partner victim and non-intimate partner victim have a correlation of .772. Non-intimate partner victim was dropped from the model as it was only significantly correlated with one probation outcome and intimate partner victim was significantly correlated with two probation outcomes. There are also many more individuals in the sample that have intimate partner victims compared to non-intimate partner victims (421 vs. 206). Finally, the correlation between having a period of initial jail or prison prior to release to community supervision and the number of initial days spent in custody is .724. The number of days in custody was dropped from the model as it is only significantly correlated with one probation outcome and having a period of initial jail or prison is significantly correlated with two probation outcomes. After the highly correlated variables are dropped from the model, Model 1 contains 16 variables.

Logistic regression for Model 1 is run for each probation outcome. The logistic regression models for Model 1 included 565 subjects. Eight individuals

were excluded from the model because of missing information about victim characteristics.

PTR filed. The χ^2 value for Model 1, for the probation outcome PTR filed, is statistically significant ($\chi^2 = 88.074$, $p<.001$), indicating that Model 1 is a significant improvement over the intercept-only model. The Nagelkerke R^2 value indicates that the model explains 19.2% of the variation in PTR filed. Overall, five variables from Model 1 are significant predictors, as seen in Table 5.8. Individuals who are married are half as likely to have a PTR filed as those who are not married (Exp(B)=.507). Individuals who have three or more prior juvenile adjudications or adult convictions are 91.5% (Exp(B)=1.915) more likely to have a PTR filed. Individuals with a current felony offense are 58.7% (Exp(B)=1.587) more likely to have a PTR filed than those on probation for a misdemeanor offense. Victim characteristics are also significant. Individuals who have a juvenile victim are 92.3% (Exp(B)=.923)less likely to have a PTR filed compared to those who do not have a juvenile victim. Individuals who have an intimate partner victim are 57.8% (Exp(B)=.578) less likely to have a PTR filed than those who do not have an intimate partner victim.

PTR filed for technical violations only. The χ^2 value for Model 1, for the probation outcome PTR filed for technical violations only, is statistically significant ($\chi^2 = 45.571$, $p<.001$). The model explains less variation in PTR filed for technical violations only, compared to the outcome PTR filed. The Nagelkerke R^2 value indicates that the model explains 11.5% of the variation in PTR filed for technical violations only. Table 5.8 presents the results for Model 1

Table 5.8

Logistic Regression Model 1: PTR Filed and PTR Filed – Technical Violations Only (N=565)

	PTR filed			PTR filed – technical violations only		
	B	SE	Exp(B)	B	SE	Exp(B)
Female	-.066	.300	.936	.491	.535	1.634
Married	-.679**	.221	.507	-.701*	.275	.496
Age at sentence	-.019	.010	.901	.009	.012	1.009
< 17 at first arrest	.240	.215	1.272	-.126	.244	.882
3+ prior adjudications/ convictions	.650**	.234	1.915	.534*	.260	1.705
Prior felony	.188	.288	1.207	-.197	.316	.821
Prior probation/ parole revocations	.689	.385	1.992	.180	.316	1.198
Prior violent conviction	.004	.236	1.004	.332	.257	1.394
Current felony offense	.462*	.215	1.587	.191	.253	1.211
Multiple offenses	.388	.246	1.474	-.165	.291	.848
DV offenses only	-.340	.328	.712	-.781*	.354	.458
Initial jail or prison	.215	.257	1.240	.505	.266	1.657
Multiple victims	.258	.302	1.295	-.229	.367	.796
Male victim	-.080	.272	.923	-.413	.309	.661
Juvenile victim	-.789**	.304	.923	-.522	.356	.593
Intimate partner victim	-.549*	.265	.578	-.502	.278	.605
Constant	.713	.565		-.559	.620	
-2 Log Likelihood	695.166			582.626		
χ^2	88.074***			45.571***		
Nagelkerke R^2	.192			.115		

*p<.05. **p<.01. ***p<.001.

for the probation outcome PTR filed for technical violations only. Only three variables from Model 1 are significant predictors. Individuals who are married are half as likely to have a PTR filed for technical violations (Exp(B)=.496) as those who are not married. Individuals with three or more juvenile adjudications or adult convictions are 70.5% (Exp(B)=1.705) more likely to have a PTR filed for technical violations compared to those with fewer than three prior adjudications or convictions. Finally, individuals who are on probation for DV offenses only are half as likely (Exp(B)=.458) to have a PTR filed for technical violations only compared to those who are on for offenses in addition to DV offenses (e.g. drug offenses, property offenses).

PTR filed for violation of DV conditions. The χ^2 value for Model 1, for the probation outcome PTR filed for a violation of DV conditions, is statistically significant (χ^2 = 60.956, p<.001). The Nagelkerke R^2 value indicates that the model explains 13.8% of the variation in PTR filed for a violation of DV conditions. Overall, two variables are significant predictors, as presented in Table 5.9. As with the outcomes PTR filed and PTR filed for technical violations only, individuals who are married are half as likely (Exp(B)=.551) to have a PTR filed for a violation of DV conditions compared to those who are not married. Age at sentence is also a significant predictor. For each year increase in age, there is a 97.3% decrease in the likelihood of having a PTR filed for a violation of DV conditions.

PTR filed for victim contact. The χ^2 value for Model 1, for the probation outcome PTR filed for victim contact, is statistically significant (χ^2 = 27.876,

Table 5.9

Logistic Regression Model 1:PTR Filed for Violation of DV Conditions and PTR Filed – Victim Contact (N=573)

	PTR filed – violation of DV conditions			PTR filed - victim contact		
	B	SE	Exp(B)	B	SE	Exp(B)
Female	-.111	.305	.895	.119	.401	1.126
Married	-.596 **	.228	.551	-.327	.287	.721
Age at sentence	-.027 *	.011	.973	-.010	.013	.990
< 17 at first arrest	.111	.213	1.117	-.212	.267	.809
3+ prior adjudications/ convictions	.443	.230	1.558	.581 *	.267	1.788
Prior felony	.335	.281	1.398	-.115	.351	.892
Prior probation/ parole revocations	.366	.349	1.442	.531	.393	1.701
Prior violent conviction	.208	.229	1.231	-.056	.279	.946
Current felony offense	.288	.217	1.334	.094	.268	1.098
Multiple offenses	.342	.243	1.408	.261	.293	1.299
DV offenses only	-.242	.313	.785	-.097	.365	.907
Initial jail or prison	-.112	.253	.894	-.035	.311	.965
Multiple victims	.048	.300	1.049	.523	.365	1.688
Male victim	-.068	.273	.935	.095	.360	1.099
Juvenile victim	-.512	.303	.600	-1.025 *	.442	.359
Intimate partner victim	-.140	.256	.869	.397	.324	1.488
Constant	.330	.557		-1.640 *	.685	
-2 Log Likelihood	700.351			541.677		
χ^2	60.956 ***			27.876 *		
Nagelkerke R^2	.138			.078		

*p<.05. **p<.01. ***p<.001.

p<.05), although only at the p<.05 level. The Nagelkerke R^2 value indicates that the model explains much less variation in PTR filed for victim contact compared to the other probation outcomes, only 7.8% of the variation. Model 1, for PTR

filed for victim contact, is presented in Table 5.9. Two variables are significant predictors. Similar to the probation outcomes PTR filed and PTR filed for technical violations only, individuals with three or more prior juvenile adjudications or adult convictions are 78.8% (Exp(B)=1.788) more likely to have a PTR filed for victim contact compared to those with fewer than three prior adjudications or convictions. Individuals with juvenile victims are one-third (Exp(B)=.359) less likely to have a PTR filed for victim contact compared to those without juvenile victims.

PTR filed for a new crime. The χ^2 value for Model 1, for the probation outcome PTR filed for a new crime, is statistically significant (χ^2 = 48.747, p<.001). The Nagelkerke R^2 value indicates that the model explains 12.1% of the variation in PTR filed for a new crime. Two variables are significant predictors of PTR filed for a new crime, which is presented in Table 5.10. Age at sentence is significant predictor. For each year increase in age, there is a 96.5% (Exp(B)=.965) decrease in the likelihood of having a PTR filed for a new crime. Individuals on probation for multiple charges are 80.9% (Exp(B)=1.809) more likely to have a PTR filed for a new crime.

PTR filed for a new DV offense. The χ^2 value for Model 1, for the probation outcome PTR filed for a new DV offense, is statistically significant (χ^2 = 25.601, p<.001). The Nagelkerke R^2 value indicates that the model explains 8.7% of the variation in PTR filed for a new DV offense. This is presented in Table 5.10. Three variables are significant predictors. Individuals with three or

Table 5.10

Logistic Regression Model 1:PTR Filed for New Crime and PTR Filed for New DV Offense (N=573)

	PTR filed – new crime			PTR filed - new DV offense		
	B	SE	Exp(B)	B	SE	Exp(B)
Female	-.541	.351	.582	-.808	.536	.446
Married	-.241	.254	.786	.548	.309	1.729
Age at sentence	-.036 **	.013	.965	-.013	.016	.987
< 17 at first arrest	.389	.232	1.476	.393	.315	1.481
3+ prior adjudications/ convictions	.260	.257	1.297	.931 **	.336	2.537
Prior felony	.488	.305	1.629	.018	.407	1.018
Prior probation/ parole revocations	.401	.357	1.493	-.205	.506	.815
Prior violent conviction	-.293	.255	.746	-.577	.336	.562
Current felony offense	.444	.248	1.559	.164	.326	1.178
Multiple offenses	.593 *	.261	1.809	.677 *	.330	1.968
DV offenses only	.384	.333	1.468	.941 *	.475	2.563
Initial jail or prison	-.283	.286	.754	.149	.363	1.161
Multiple victims	.353	.317	1.423	.205	.418	1.228
Male victim	.267	.302	1.306	.215	.418	1.240
Juvenile victim	-.433	.330	.648	-.251	.436	.778
Intimate partner victim	-.076	.278	.928	.087	.392	1.091
Constant	-.916	.620		-3.345	.871	
-2 Log Likelihood	596.917			377.733		
χ^2	48.747 ***			25.601		
Nagelkerke R^2	.121			.087		

*p<.05. **p<.01. ***p<.001.

more prior juvenile adjudications or adult convictions are 2.5 times more likely (Exp(B)=2.537) to have a PTR filed for a new DV offense. Individuals on probation for DV offense only are also 2.5 time more likely (Exp(B)=2.563) to have a PTR filed for a new DV offense compared to those on probation for DV and other types of offenses. Finally, individuals on probation for multiple charges are 96.8% (Exp(B)=1.968) more likely to have a PTR filed for a new DV offense.

Unsuccessful probation status. Table 5.11 presents the results of Model 1 for unsuccessful probation status. The χ^2 value for Model 1, for the probation outcome of an unsuccessful probation status, is statistically significant (χ^2 = 96.599, p<.001). The Nagelkerke R^2 value for this outcome is the highest of any of the probation outcomes, indicating that the model explains 21.8% of the variation in unsuccessful probation status. Six variables are significant predictors of unsuccessful probation status. Age at sentence is significant and indicates that for each year increase in age there is a 96.9% (Exp(B)=.969) decrease in the likelihood of having an unsuccessful probation status. Individuals with juvenile victims are 39.9% (Exp(B)=.399) less likely to have an unsuccessful probation status and individuals with intimate partner victims are 42.8% (Exp(B)=.428) less likely to have an unsuccessful probation status. Individuals with three or more prior juvenile adjudications or adult convictions are 96.6% (Exp(B)=1.966) more likely to have an unsuccessful probation outcome compared to those with fewer than three prior adjudications or convictions. Individuals on probation for a current felony offense are 69.1% (Exp(B)=1.691) more likely to have an unsuccessful probation status than those on probation for a misdemeanor offense.

Table 5.11

Logistic Regression Model 1:Unsuccessful Probation Status (N=573)

	Unsuccessful Probation Status		
	B	SE	Exp(B)
Female	-.240	.336	.787
Married	-.389	.245	.678
Age at sentence	-.031 **	.012	.969
< 17 at first arrest	.193	.225	1.213
3+ prior adjudications/ convictions	.676 **	.244	1.966
Prior felony	.439	.291	1.551
Prior probation/ parole revocations	.426	.357	1.532
Prior violent conviction	-.023	.244	.978
Current felony offense	.525 *	.242	1.691
Multiple offenses	.015	.265	1.015
DV offenses only	-.448	.333	.639
Initial jail or prison	.659 *	.259	1.933
Multiple victims	.094	.328	1.099
Male victim	-.514	.300	.598
Juvenile victim	-.918 **	.333	.399
Intimate partner victim	-.849 **	.273	.428
Constant	.704	.600	
-2 Log Likelihood	627.638		
χ^2	96.599 ***		
Nagelkerke R^2	.218		

*p<.05. **p<.01. ***p<.001.

Finally, individuals who spent initial time in jail or prison before release to community supervision are 93.3% (Exp(B)=1.933) more likely to have an unsuccessful probation status compared to those who did not spend initial time in custody.

Model 2

Model 2 includes variables related to probation supervision. There are seven supervision variables significantly correlated with probation outcomes. The seven variables include: 1) initial assignment to specialized domestic violence

caseload; 2) change in type of supervision; 3) number of days on initial type of supervision; 4) total number of client contacts, 5) total number of face-to face client contacts; 6) total number of victim contacts; and 7) average number of contacts per month. The bivariate correlations among the variables were reviewed prior to running the logistic regression models for each probation outcome to determine if any variables had correlations above .70. Three correlations above .70 were identified, all of which were among the contact variables. The total number of client contacts and the total number of face-to-face contacts have a correlation of .990. This is not surprising as the majority of client contacts are face-to-face. The correlation between the total number of contacts and the average number of contacts per month is .719, and the correlation between the total number of face-to-face contacts and the average number of contacts per month is .721. Based upon these correlations, the total number of contacts and the total number of face-to-face contacts were dropped from the model. This is because the average number of contacts is significantly correlated with three outcome measures and had stronger correlations with the outcome measures, all above .10, compared to the total number of contacts or the total number of face-to-face contacts.

Prior to running the logistic regression equations for Model 2, dummy variables were created for the variable change in type of supervision. The reference category is no change in type of supervision. Dummy variables were created for a decrease in supervision and for an increase in supervision. Examples of decreases in supervision include being transferred from a specialized

domestic violence caseload to standard probation or from standard probation to a Minimum Assessed Risk Supervision (MARS) caseload or unsupervised probation. Examples of increases in supervision include being transferred from standard probation to a specialized caseload or to Intensive Probation Supervision (IPS).

PTR filed. Table 5.12 presents the results for the logistic regression equation for Model 2 for the probation outcome PTR filed. The χ^2 value for Model 2, for the probation outcome PTR filed, is statistically significant (χ^2 = 140.856, p<.001), indicating that Model 2 is a significant improvement over the intercept-only model. The Nagelkerke R^2 value indicates that the model explains 29.1% of the variation in PTR filed. This is approximately ten percent higher than the amount of variation in PTR explained by the static demographic, criminal history, current offense and victim characteristic variables, which is 19.2%. Three variables are significant predictors. Individuals initially assigned to the specialized domestic violence caseloads are 4.7 times (Exp(B)=4.658) more likely to have a PTR filed than those initially assigned to standard probation caseloads. Individuals who have an increase in supervision are 7.9 times (Exp(B)=7.913) more likely to have a PTR filed compared to those who do not have a change in supervision or who have a decrease in supervision. Individuals who experience a decrease in supervision are 14.2% (Exp(B)=.142) less likely to have a PTR filed compared to those who do not have a change in supervision or who have an increase in supervision.

Table 5.12

Logistic Regression Model 2:PTR Filed and PTR Filed – Technical Violations Only (N=565)

	PTR filed			PTR filed – technical violations only		
	B	SE	Exp(B)	B	SE	Exp(B)
Assignment DV caseload	1.539***	.230	4.658	1.420***	.233	4.138
Decrease in supervision	-1.950***	.395	.142	-1.278**	.458	.278
Increase in supervision	2.068***	.308	7.913	.793**	.264	2.209
Days on initial caseload assignment	.000	.000	1.000	.001**	.000	.999
Total # of victim contacts	.002	.022	1.002	-.024	.024	.976
Average # contacts per month	-.166	.092	.847	-.100	.087	.905
Constant	-.391	.240		-1.20***	.265	
-2 Log Likelihood	653.447			566.881		
χ^2	140.856***			68.047***		
Nagelkerke R^2	.291			.167		

*p<.05. **p<.01. ***p<.001.

PTR filed for technical violations only. The χ^2 value for Model 2, for the probation outcome PTR filed for technical violations only, is statistically significant (χ^2 = 68.047, p<.001). The Nagelkerke R^2 value indicates that the model explains 16.7% of the variation in PTR filed for technical violations only. The results are presented in Table 5.12. Three variables are significant predictors. Those initially assigned to the specialized domestic violence caseloads are 4.1 times (Exp(B)=4.138) more likely to have a PTR filed for technical violations only than those initially assigned to standard probation caseloads. Individuals

who have an increase in supervision are 2.2 times (Exp(B)=2.209) more likely to have a PTR filed for technical violations than those who do not have a change in supervision or who have a decrease in supervision. Individuals who have a decrease in supervision are 27.8% (Exp(B)=.278) less likely to have a PTR filed for technical violations compared to those who do not have a change in supervision or who have an increase in supervision. Finally, for each additional day on the initial caseload assignment, there is a 99.9% (Exp(B)=.999) decrease in the likelihood of having a PTR filed for technical violations only.

PTR violation of DV conditions. The χ^2 value for Model 2, for the probation outcome PTR filed for a violation of DV conditions, is statistically significant (χ^2 = 111.725, p<.001). The Nagelkerke R^2 value indicates that the model explains 23.9% of the variation in PTR filed for a violation of DV conditions. Three variables are significant. This information is presented in Table 5.13. Individuals initially assigned to the specialized domestic violence caseloads are 4.3 time (Exp(B)=4.262) more likely to have a PTR filed for a violation of DV conditions compared to those initially assigned to standard probation caseloads. Those who have an increase in supervision are 4.4 times (Exp(B)=4.408) more likely to have a PTR filed for a violation of DV conditions compared to those who do not have a change in supervision or those who have a decrease in supervision. Individuals who have a decrease in supervision are 13.9% (Exp(B)=.0139) less likely to have a PTR filed for a violation of DV conditions compared to those who do not have a change in supervision or those who have an increase in supervision.

Table 5.13

Logistic Regression Model 2:PTR Filed for Violation of DV Conditions and PTR Filed – Victim Contact (N=573)

	PTR filed – violation of DV conditions			PTR filed – victim contact		
	B	SE	Exp(B)	B	SE	Exp(B)
Assignment DV caseload	1.450***	.220	4.262	.863***	.249	2.369
Decrease in supervision	-1.972***	.457	.139	-1.950***	.734	.142
Increase in supervision	1.483***	.261	4.408	.551*	.280	1.735
Days on initial caseload assignment	.000	.000	1.000	-.001	.000	.999
Total # of victim contacts	-.004	.021	.996	.056**	.022	1.058
Average # contacts per month	-.060	.085	.942	.055	.088	1.057
Constant	-1.009***	.242		-1.850***	.292	
-2 Log Likelihood	660.191			496.718		
χ^2	111.725***			52.076***		
Nagelkerke R^2	.239			.141		

*p<.05. **p<.01. ***p<.001.

PTR filed for victim contact. Table 5.13 presents the results of Model 2 for the probation outcome PTR filed for victim contact. The χ^2 value for Model 2 is statistically significant ($\chi^2 = 52.076$, p<.001). The Nagelkerke R^2 value indicates that the model explains 14.1% of the variation in PTR filed for victim contact. Four variables are significant. Three of the variables that are significant are consistent with the variables that are significant for the probation outcomes PTR filed, PTR filed for technical violations only and PTR filed for a violation of DV conditions. An initial assignment to the specialized domestic violence

caseload increases the likelihood of a PTR for victim contact by 2.4 times (Exp(B)=2.369). Individuals who have an increase in supervision are 1.7 times (Exp(B)=1.735) more likely to have a PTR filed for victim contact than those who have no change in supervision or a decrease in supervision. Individuals who have a decrease in supervision are 14.2% (Exp(B)=.142) less likely to have a PTR filed for victim contact than those who have no change in supervision or an increase in supervision. Victim contacts are also a significant predictor. For each additional victim contact, between the victim and the probation officer, there is a 5.8% increase in the likelihood of having a PTR filed for victim contact.

PTR filed for a new crime. Table 5.14 presents the results for Model 2 for the probation outcome PTR filed for a new crime. The χ^2 value is statistically significant ($\chi^2 = 47.209$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 11.6% of the variation in PTR filed for a new crime. Initial assignment to a specialized domestic violence caseload is not a significant predictor. Two variables are significant predictors. Those who have an increase in supervision are 3.2 times (Exp(B)=3.219) more likely to have a PTR filed for a new crime than those who have no change in supervision or a decrease in supervision. Individuals who have a decrease in supervision are 18.6% (Exp(B)=.186) less likely to have a PTR filed for a new crime compared to those with no change in supervision or an increase in supervision.

PTR filed for a new DV offense. The χ^2 value for Model 2, for PTR filed for a new DV offense, is statistically significant ($\chi^2 = 31.531$, $p<.001$). The

Table 5.14

Logistic Regression Model 2:PTR Filed for New Crime and PTR Filed for New DV Offense (N=573)

	PTR filed – new crime			PTR filed – new DV offense		
	B	SE	Exp(B)	B	SE	Exp(B)
Assignment DV caseload	.285	.224	1.330	.182	.295	1.200
Decrease in supervision	-1.682 **	.609	.186	-7.043	13.158	.001
Increase in supervision	1.169 ***	.249	3.219	.938 **	.311	2.555
Days on initial caseload assignment	.000	.000	1.000	.000	.000	1.000
Total # of victim contacts	.034	.021	1.034	.051 *	.024	1.052
Average # contacts per month	-.043	.086	.958	.003	.104	1.003
Constant	-1.629 ***	.258		-2.335 ***	.343	
-2 Log Likelihood	611.639			385.927		
χ^2	47.209 ***			31.531 ***		
Nagelkerke R^2	.116			.103		

*p<.05. **p<.01. ***p<.001.

Nagelkerke R^2 value indicates that the model explains 10.3% of the variation in PTR filed for a new DV offense, the lowest amount of variation explained by the model. The results are presented in Table 5.14. Two variables are significant predictors. Individuals who have an increase in supervision are 2.6 times (Exp(B)=2.555) more likely to have a PTR filed for a new DV offense than those who have no change in supervision or an increase in supervision. The number of victim contacts is also a significant predictor. For each additional victim contact

between the victim and the probation officer, there is a 5.2% increase in the likelihood of having a PTR filed for a new DV offense.

Unsuccessful probation status. The χ^2 value for Model 2 for the outcome unsuccessful probation status is statistically significant ($\chi^2 = 163.572$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 34.3% of the variation in an unsuccessful probation status, the highest amount of variation explained in any of the probation outcomes. The results are presented in Table 5.15. Five variables are significant predictors and reflect the variables that have been significant across Model 2 for other probation outcomes. An initial assignment to a specialized domestic violence caseload increases the likelihood of an unsuccessful probation status by 4.7 (Exp(B)=4.685) times. Individuals with an increase in supervision are 3.4 times (Exp(B)=3.400) more likely to have an unsuccessful probation status compared to those who have no change or a decrease in supervision. Individuals who have a decrease in supervision are 2.0% (Exp(B)=.020) less likely to have an unsuccessful probation status compared to those who have no change or an increase in supervision. For each additional day on the initial caseload assignment, there is a 98.0% (Exp(B)=.980) decrease in the likelihood of having an unsuccessful probation status. Finally, the relationship with victim contacts differs between unsuccessful probation status and the other variables for which it is a significant predictor. For each additional contact between the victim and the probationer, there is a 78.4% decrease in the likelihood of having an unsuccessful probation outcome.

Table 5.15

Logistic Regression Model 2:Unsuccessful Probation Status (N=573)

	Unsuccessful probation status		
	B	SE	Exp(B)
Assignment DV caseload	1.544***	.237	4.685
Decrease in supervision	-3.897***	1.022	.020
Increase in supervision	1.224***	.264	3.400
Days on initial caseload assignment	-.002***	.000	.998
Total # of victim contacts	-.020	.023	.980
Average # contacts per month	.244**	.088	.784
Constant	.100	.253	
-2 Log Likelihood	572.609		
χ^2	163.572***		
Nagelkerke R^2	.343		

*p<.05. **p<.01. ***p<.001.

Model 3

Model 3 includes variables from the DVSI that are significantly related to probation outcomes. There are 13 variables from the DVSI that are significantly related to at least one probation outcome. These variables include 1) the total DVSI score; 2) the DVSI risk categories, determined by the DVSI score; 3) the DVSI risk categories, determined by the calculated percentage; 4) prior non-DV convictions; 5) prior arrests for assault, menacing or harassing; 6) prior DV treatment; 7) prior drug or alcohol treatment; 8) history of orders of protection; 9) history of violating orders of protection; 10) unemployed; 11) separated from the victim within the past six months; 12) victim had a restraining order at the time of the current offense; and 13) offender under community supervision at the time of the current offense. Bivariate correlations between these variables were reviewed

to determine if any were significantly correlated, potentially influencing the coefficients of the logistic regression model. The total DVSI was significantly correlated with both risk categories determined by the DVSI score, .809, and the risk categories determined by the calculated percentage, .796. The variables based on the DVSI risk categories were eliminated from the model and the total DVSI retained, as the total DVSI score is significantly related to all of the probation outcomes. High correlations were also found among the DVSI items related to orders of protection. The strongest correlation, .855, is found for the variables history of violating orders of protection and a restraining order at the time of the current offense. A history of violating orders of protection was also highly correlated with a history of orders of protection, .729. A history of violating orders of protection was retained in the model, and the other two variables related to orders of protection eliminated from the model as it was significantly correlated with four probation outcomes and has the strongest correlations with outcomes among those three variables. After eliminating these variables, Model 3 has nine variables.

PTR filed. Table 5.16 presents the results for Model 3 for the probation outcome PTR filed. The χ^2 value is statistically significant ($\chi^2 = 90.804$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 19.5% of the variation in PTR filed. Three of the DVSI items are significant predictors. The strongest predictor is being unemployed. Individuals who are unemployed are 3.9 times (Exp(B)=3.863) more likely to have a PTR filed than those who are employed.

Table 5.16

Logistic Regression Model 3: PTR Filed and PTR Filed –Technical Violations Only (N=565)

	PTR filed			PTR filed – technical violations only		
	B	SE	Exp(B)	B	SE	Exp(B)
Total DVSI score	.001	.049	1.001	.032	.053	1.033
Prior non-DV convictions	.232	.218	1.261	.130	.242	1.130
Prior arrests assault, menacing, harassing	.396	.218	1.487	.014	.248	1.015
Prior DV treatment	-.427	.316	.653	.168	.330	1.183
Prior drug or alcohol treatment	.425 *	.217	1.530	.535 *	.228	1.707
History of violating orders of protection	.440	.325	1.553	.432	.353	1.541
Unemployed	1.351 ***	.218	3.863	.873	.240	2.394
Separated from victim in past six months	.412 *	.206	1.510	.003	.230	1.003
On community supervision at time of offense	.518	.336	1.678	-.289	.230	.749
Constant	-1.302 ***	.223		-2.151***	.258	
-2 Log Likelihood	703.499			593.177		
χ^2	90.804 ***			41.752***		
Nagelkerke R^2	.195			.105		

*p<.05. **p<.01. ***p<.001.

Individuals who have had prior drug or alcohol treatment are 53% (Exp(B)=1.530) more likely to have a PTR filed than those who have not had prior drug or alcohol treatment. Finally, individuals who separated from the victim within the past six month (at the time of the assessment) are 51% (Exp(B)=1.510) more likely to have a PTR filed than those who did not separate from the victim.

PTR filed for technical violations only. Table 5.16 also presents the results for Model 3 for the probation outcome PTR filed for technical violations only. The χ^2 value is statistically significant ($\chi^2 = 41.752$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 10.5% of the variation in PTR filed for technical violations only. Two variables are significant predictors. Individuals who have had prior drug or alcohol treatment are 70.7% (Exp(B)=1.707) more likely to have a PTR filed for technical violations only compared to those who have not had prior drug or alcohol treatment. Individuals who are unemployed are 2.4 times (Exp(B)=2.394) more likely to have a PTR filed for technical violations compared to individuals who are employed.

PTR filed for a violation of DV conditions. The χ^2 value for Model 3 for the probation outcome PTR filed for a violation of DV conditions is statistically significant ($\chi^2 = 88.422$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 19.3% of the variation in PTR filed for a violation of DV conditions. The model is presented in Table 5.17. Four variables are significant predictors. Individuals who have prior arrests for assault, menacing or harassing are 67.1% (Exp(B)=1.671) more likely to have a PTR filed for a violation of DV conditions compared to those who do not have these types of arrests. Individuals who have had prior drug or alcohol treatment are 54.5% (Exp(B)=1.545) more likely to have a PTR filed for a violation of DV conditions. Individuals who were separated from the victim within the past six months (at the time of the assessment) are 86.6% (Exp(B)=1.866) more likely to have a PTR filed for a violation of DV conditions. The strongest predictor is being unemployed.

Table 5.17

Logistic Regression Model 3: PTR Filed for Violation of DV Conditions and PTR Filed for Victim Contact (N=573)

	PTR filed – violation of DV conditions			PTR filed – victim contact		
	B	SE	Exp(B)	B	SE	Exp(B)
Total DVSI score	-.021	.049	.979	-.066	.059	.936
Prior non-DV convictions	.301	.220	1.352	.295	.264	1.343
Prior arrests assault, menacing, harassing	.514 *	.223	1.671	.038	.276	1.039
Prior DV treatment	-.258	.315	.773	.444	.346	1.559
Prior drug or alcohol treatment	.435 *	.216	1.545	.717 **	.246	2.048
History of violating orders of protection	.567	.327	1.763	.444	.390	1.558
Unemployed	1.286 ***	.220	3.620	.752 **	.267	2.121
Separated from victim in past six months	.624 **	.211	1.866	.589 *	.258	1.802
On community supervision at time of offense	.624 **	.211	1.866	.880 *	.350	2.410
Constant	-1.865 ***	.239		-2.369 ***	.288	
-2 Log Likelihood	683.494			514.835		
χ^2	88.422 ***			33.959 ***		
Nagelkerke R^2	.193			.093		

*p<.05. **p<.01. ***p<.001.

Individuals who are unemployed are 3.6 times (Exp(B)=3.620) more likely to have a PTR filed for a violation of DV conditions compared to those who are employed.

PTR filed for victim contact. Table 5.17 presents Model 3 for the probation outcome PTR filed for victim contact. The χ^2 value is statistically

significant (χ^2 = 33.959, p<.001). The Nagelkerke R^2 value indicates that the model explains 9.3% of the variation in PTR filed for victim contact. Four variables are significant predictors. Three are consistent with variable that have been found to be significant predictors of other probation outcomes. Individuals who have had prior drug or alcohol treatment are 2.0 times (Exp(B)=2.048) more likely to have a petition filed for victim contact compared to those who have not had prior drug or alcohol treatment. Individuals who are unemployed are 2.1 times (Exp(B)=2.121) more likely to have a PTR filed for victim contact compared to those who are employed. Individuals who separated from the victim within the past six months (at the time of assessment) are 80.2% (Exp(B)=1.802) more likely to have a PTR filed for victim contact compared to those who did not separate from the victim. In addition, to these three variables, individuals who were on community supervision at the time of the current offense are 2.4 times (Exp(B)=2.410) more likely to have a PTR filed for victim contact compared to those who were not on community supervision at the time of the current offense.

PTR filed for a new crime. Table 5.18 presents the results of Model 3 for the probation outcome PTR filed for a new crime. The χ^2 value is statistically significant (χ^2 = 33.488, p<.001). The Nagelkerke R^2 value indicates that the model explains 8.3% of the variation in PTR filed for a new crime. Three variables are significant predictors. The strongest predictor is being unemployed. Individuals who are unemployed are 2.2 times (Exp(B)=2.224) more likely to have a PTR filed for a new crime compared to individuals who are employed. The second strongest predictor is being on community supervision at the time of

Table 5.18

Logistic Regression Model 3:PTR Filed for New Crime and PTR Filed for New DV Offense (N=573)

	PTR filed – new crime			PTR filed – new DV offense		
	B	SE	Exp(B)	B	SE	Exp(B)
Total DVSI score	-.038	.052	.962	-.118	.069	.889
Prior non-DV convictions	.181	.234	1.198	.422	.313	1.525
Prior arrests assault, menacing, harassing	.448	.238	1.565	.687 *	.320	1.987
Prior DV treatment	-.639	.356	.528	-.771	.499	.463
Prior drug or alcohol treatment	-.032	.234	.969	-.110	.319	.896
History of violating orders of protection	.117	.351	1.124	.832	.455	2.297
Unemployed	.799 ***	.233	2.224	.569	.316	1.767
Separated from victim in past six months	.512 *	.226	1.669	.431	.301	1.539
On community supervision at time of offense	.774 *	.329	2.169	1.201 **	.410	3.323
Constant	-1.774 ***	.247		-2.520 ***	.338	
-2 Log Likelihood	625.360			395.060		
χ^2	33.488 ***			22.398 **		
Nagelkerke R^2	.083			.074		

*p<.05. **p<.01. ***p<.001.

the offense. Individuals who were on community supervision at the time of the offense are 2.2 times (Exp(B)=2.169) more likely to have a PTR filed for a new crime compared to those who were not on community supervision. Finally, individuals who separated from the victim within the past six months (at the time

of the assessment) are 66.9% (Exp(B)=1.669) more likely to have a PTR filed for a new crime compared to those who did not separate from the victim.

PTR for a new DV offense. Table 5.18 also presents the results of Model 3 for the probation outcome PTR filed for a new DV offense. The χ^2 value is statistically significant (χ^2 = 11.398, p<.001). The Nagelkerke R^2 value for this outcome is the lowest of all of the probation outcomes and indicates that the model explains 7.4% of the variation in PTR filed for a new DV offense. Two variables are significant predictors. Individuals who have prior arrests for assault, menacing or harassing are 98.7% (Exp(B)=1.987) more likely to have a PTR filed for a new DV offense. The strongest correlation is for individuals who were on community supervision at the time of the current offense. These individuals are 3.3 times (Exp(B)=3.323) more likely to have a PTR filed for a new DV offense compared to those who were not on community supervision.

Unsuccessful probation status. The χ^2 value for Model 3 for the probation outcome unsuccessful probation status is statistically significant (χ^2 = 88.996, p<.001). The Nagelkerke R^2 value indicates that the model explains 19.5% of the variation in unsuccessful probation status. The model is presented in Table 5.19. Two variables are significant predictors. Consistent with other models, individuals who are unemployed are 3.5 times (Exp(B)=3.459) more likely to have an unsuccessful probation status compared to individuals who are employed. In addition, individuals who have had prior domestic violence treatment are half as likely (Exp(B)=.509) to have an unsuccessful probation

status compared to individuals who have not had prior treatment for domestic violence.

Table 5.19

Logistic Regression Model 3:Unsuccessful Probation Status (N=573)

	Unsuccessful probation status		
	B	SE	Exp(B)
Total DVSI score	.069	.051	1.07
Prior non-DV convictions	.237	.227	1.268
Prior arrests assault, menacing, harassing	.086	.231	1.090
Prior DV treatment	-.676 *	.338	.509
Prior drug or alcohol treatment	.148	.223	1.160
History of violating orders of protection	.032	.340	1.075
Unemployed	1.241 ***	.222	3.459
Separated from victim in past six months	.179	.217	1.196
On community supervision at time of offense	.505	.325	1.657
Constant	-2.060	.249	
-2 Log Likelihood	649.185		
χ^2	88.996 ***		
Nagelkerke R^2	.195		

*p<.05. **p<.01. ***p<.001.

Model 4

Model 4 includes variables from the initial OST/FROST assessment that are significantly correlated with probation outcomes. There are 12 variables that are significantly correlated with at least one probation outcome. They include: 1) initial OST/FROST score; 2) risk categories using the 2006 cutoff scores; 3) risk categories using the 2009 cutoff scores; 4) total score of the static items; 5) total score of the dynamic items; 6) vocational/financial category total; 7) education

category total; 8) family and social relationships category total; 9) residence and neighborhood category total; 10) drug abuse category total; 11) attitude category total; 12) criminal behavior category total. Bivariate correlations were reviewed to identify any correlations between variables above .70. As with the DVSI, the total OST/FROST score was highly correlated with the risk categories of the OST/FROST, using the 2006 cutoff scores, .747, or the 2009 cutoff scores, .894. The total OST/FROST score also has a strong correlation to the total of the static items, .794, and the total of the dynamic items, .902. Based upon these correlations, the risk category variables were eliminated from the model, to be consistent with the assessment variable used from the DVSI. In addition, the total OST/FROST score was removed from the model. The initial OST/FROST score, the static total and the dynamic total were all significantly correlated with the same six probation outcomes. The static total and the dynamic total were retained to allow the ability to look at the contribution of the static items and the dynamic items separately. The final version of Model 4 includes nine variables.

PTR filed. Table 5.20 presents the results of Model 4 for the probation outcome PTR filed. The χ^2 value is statistically significant ($\chi^2 = 84.108$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 18.2% of the variation in PTR filed. Two variables are significant predictors. For each one point increase in the total score of the vocational/financial category, there is a 57.5% (Exp(B)=1.575) increase in the likelihood of having a PTR filed. For each one

Table 5.20

Logistic Regression Model 4:PTR Filed and PTR Filed for Technical Violations Only (N=573)

	PTR filed			PTR filed – technical violations only		
	B	SE	Exp(B)	B	SE	Exp(B)
Total static score	.050	.093	1.052	-.036	.101	.965
Total dynamic score	-.012	.081	.988	.082	.088	1.085
Vocational/financial	.454***	.126	1.575	.059	.130	1.061
Education	.074	.211	1.077	-.087	.236	.917
Family & social relationships	.051	.111	.1052	.151	.120	1.163
Residence & neighborhood	.211	.211	1.235	.004	.218	1.004
Drug abuse	.346**	.115	1.414	.145	.120	1.156
Attitude	.014	.106	1.014	-.075	.115	.928
Criminal behavior	.094	.106	1.099	.009	.115	1.009
Constant	-1.282***	.275		-2.009**	.303	
-2 Log Likelihood	710.195			612.751		
χ^2	84.108***			22.177		
Nagelkerke R^2	.182			.057		

*p<.05. **p<.01. ***p<.001.

point increase in the total score of the drug abuse category there is a 41.4% (Exp(B)=1.414) increase in the likelihood of having a PTR filed.

PTR filed for technical violations only. Table 5.20 also presents the results of Model 4r for the probation outcome PTR filed for technical violations only. The χ^2 value is not statistically significant (χ^2 = 22.177, p=.057). The Nagelkerke R^2 value indicates that the model only explains 5.7% of the variation in PTR filed for technical violations only. None of the variables in the model are significant predictors of PTR filed for technical violations only.

PTR filed for violation of DV conditions. The χ^2 value for Model 4 for the probation outcome PTR filed for a violation of DV conditions is statistically significant ($\chi^2 = 71.216$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 15.8% of the variation in PTR filed for a violation of DV conditions. As with the results of Model 4 for the probation outcome PTR filed, the same two predictors are significant of PTR filed for a violation of DV conditions. The results are presented in Table 5.21. For each one point increase in the total score of the vocational/financial category, there is a 60.4% increase in the likelihood of having a PTR filed for a violation of DV conditions. For each one point increase in the total score of the drug abuse category, there is a 43.4% increase in the likelihood of having a PTR filed for a violation of DV conditions.

PTR filed for victim contact. Table 5.21 also presents the results for Model 4 for the probation outcome PTR filed for victim contact. The χ^2 value is statistically significant ($\chi^2 = 27.681$, $p=.001$). The Nagelkerke R^2 value indicates that the model explains 7.7% of the variation in PTR filed for victim contact. However, although the chi-square value indicates that the model is significantly better than the intercept-only model, none of the variables are significant predictors of PTR filed for victim contact.

PTR filed for a new crime. The χ^2 value for Model 4 for the probation outcome PTR filed for a new crime is statistically significant ($\chi^2 = 44.371$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 10.9% of the variation in PTR filed for a new crime. The results are presented in Table 5.22.

Table 5.21

Logistic Regression Model 4 :PTR Filed for Violation of DV Conditions and PTR Filed for Victim Contact (N=573)

	PTR Filed – Violation of DV Conditions			PTR Filed – Victim Contact		
	B	SE	Exp(B)	B	SE	Exp(B)
Total Static Score	.010	.093	1.010	.124	.110	1.132
Total Dynamic Score	-.078	.082	.925	.070	.101	1.073
Vocational/Financial	.472***	.124	1.604	.130	.144	1.138
Education	.249	.212	1.283	.039	.193	1.040
Family & Social Relationships	.103	.111	1.109	-.148	.135	.863
Residence & Neighborhood	.017	.208	1.017	.056	.237	1.057
Drug Abuse	.361***	.113	1.434	.189	.130	1.209
Attitude	.108	.107	1.115	-.079	.128	.924
Criminal Behavior	.146	.106	1.157	-.006	.127	.994
Constant	-1.647	.280		-2.351	.337	
-2 Log Likelihood	700.699			521.114		
χ^2	71.216***			27.681***		
Nagelkerke R^2	.158			.077		

*p<.05. **p<.01. ***p<.001.

Two variables are significant predictors. For each one point increase in the total score of the vocational/financial category, there is a 58.3% (Exp(B)=1.583) increase in the likelihood of having a PTR filed for a new crime. For each one point increase in the total score of the drug abuse category, there is a 27.9% (Exp(B)=1.279) increase in the likelihood of having a PTR filed for a new crime.

PTR filed for a new DV offense. Table 5.22 also presents the results of Model 4 for the probation outcome PTR filed for a new DV offense. The χ^2 value

Table 5.22

Logistic Regression Model 4: PTR Filed for New Crime and PTR Filed for New DV Offense (N=573)

	PTR filed – new crime			PTR filed – new DV offense		
	B	SE	Exp(B)	B	SE	Exp(B)
Total static score	.098	.101	1.103	.020	.130	1.020
Total dynamic score	-.105	.094	.900	.099	.117	1.104
Vocational/financial	.459***	.134	1.583	.050	.170	1.051
Education	.151	.176	1.163	-.041	.231	.960
Family & social relationships	-.111	.122	.895	-.138	.160	.871
Residence & neighborhood	.171	.220	1.187	-.065	.287	.937
Drug abuse	.246*	.122	1.279	.003	.155	1.003
Attitude	.098	.118	1.103	-.125	.150	.883
Criminal behavior	.103	.116	1.109	.106	.149	1.111
Constant	-1.743	.297		-2.636***	.397	
-2 Log Likelihood	614.476			409.315		
χ^2	44.371***			8.143		
Nagelkerke R^2	.109			.027		

*p<.05. **p<.01. ***p<.001.

is not statistically significant (χ^2 = 8.143, p=). The Nagelkerke R^2 value indicates that the only model explains 2.7% of the variation in PTR filed for a new DV offense. None of the variables in the model are found to be significant predictors of PTR filed for a new DV offense.

Unsuccessful probation status. The χ^2 value for Model 4 for the probation outcome unsuccessful probation status is statistically significant (χ^2 = 74.247, p<.001). The Nagelkerke R^2 value indicates that the model explains 16.8% of the variation in unsuccessful probation status. The results are presented

in Table 5.23. Six variables are significant predictors. Surprisingly, for each increase in the total static score of the initial OST/FROST there is an 82.3% (Exp(B)=.823) decrease in the likelihood of having an unsuccessful probation status. Five of the category scores from the initial OST/FROST are also significant predictors and reflect a consistent pattern. Each additional point increase in the total score of the category, increases the likelihood of an unsuccessful probation status. Similar to some of the probation outcomes, a one point increase in the total score of the vocational/financial category, has a 71.8% (Exp(B)=1.718) increase in the likelihood of an unsuccessful probation status. A one point increase in the drug abuse category has a 50.4% (Exp(B)=1.504) increase in the likelihood of an unsuccessful probation status. Additional OST/FROST categories are also significant predictors. A one point increase in the total score of the education category has a 40.4% (Exp(B)=1.404) increase in the likelihood of an unsuccessful probation status. In the family and social relationships category, a one point increase has a 44.8% (Exp(B)=1.448) increase in the likelihood of an unsuccessful probation status. Finally, a one point increase in the criminal behavior category has a 42.3% (Exp(B)=1.423) increase in the likelihood of an unsuccessful probation status.

Table 5.23

Logistic Regression Model 4:Unsuccessful Probation Status (N=573)

	Unsuccessful probation status		
	B	SE	Exp(B)
Total static score	-.195 *	.099	.823
Total dynamic score	-.163	.090	.850
Vocational/financial	.541 ***	.131	1.718
Education	.340 *	.172	1.404
Family & social relationships	.370 **	.119	1.448
Residence & neighborhood	.375	.211	1.454
Drug abuse	.408 ***	.120	1.504
Attitude	.102	.114	1.108
Criminal behavior	.353 **	.113	1.423
Constant	-2.022 ***	.297	
-2 Log Likelihood	661.934		
χ^2	74.247 ***		
Nagelkerke R^2	.168		

*p<.05. **p<.01. ***p<.001.

Model 5

A final model is created for each probation outcome containing only those variables that are significant from Model 1 through Model 4.

PTR filed. From Model 1 through Model 4, there are 13 variables significantly related to the probation outcome PTR filed. The variables include: 1) married; 2) three or more prior juvenile adjudications or adult convictions; 3) current felony offense; 4) juvenile victim; 5) intimate partner victim; 6) initial assignment to specialized domestic violence caseload; 7) decrease in supervision; 8) increase in supervision; 9) prior drug or alcohol treatment; 10) unemployed; 11) separated from victim in the past six months; 12) vocational/financial

category score; and 13) drug abuse category score. None of the variables are strongly correlated with each other. The strongest correlation among the variables is .564 for the variables unemployed, from the DVSI, and the vocational/financial category score of the OST/FROST. Although these two variables are similar, they are not more strongly correlated because the vocational/financial category score of the OST/FROST includes more than just employment status.

Table 5.24 presents the results of Model 5 for the variable PTR filed. The χ^2 value is statistically significant ($\chi^2 = 218.284$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 42.7% of the variation in PTR filed, the most variation explained of any of the models. Eight variables are significant predictors. Individuals who are married are half as likely (Exp(B)=.493) to have a PTR filed as those who are not married. Individuals with three or more prior juvenile adjudications or adult convictions are 73.3% (Exp(B)=1.733)more likely to have a PTR filed than those with fewer adjudications or convictions. Individuals with a juvenile victim are half as likely (Exp(B)=.484) to have a PTR filed as those without juvenile victims. Individuals initially assigned to the specialized domestic violence caseloads are 2.7 times (Exp(B)=2.680) more likely to have a PTR filed than those initially assigned to standard probation. The strongest predictor is whether or not there is an increase in supervision. Individuals who have an increase in supervision are 8.339 times (Exp(B)=8.339) more likely to have a PTR filed than those who have no change in supervision or a decrease in supervision. Individuals with a decrease in supervision are 17.4% (Exp(B=.174) less likely to have a PTR filed than those with no change in

supervision or an increase in supervision. Individuals who are unemployed are 2.1 times (Exp(B)=2.063) more likely to have a PTR filed than those who are employed. Finally, a one point increase in the score for the drug category of the OST/FROST increases the likelihood of a PTR being filed by 44.2% (Exp(B)=1.442).

Table 5.24

Logistic Regression Model 5 for PTR Filed (N=565)

	PTR Filed		
	B	SE	Exp(B)
Married	-.708 **	.250	.493
3+ prior adjudications/convictions	.550 *	.234	1.733
Current felony offense	.104	.238	1.110
Juvenile victim	-.726 *	.314	.484
Intimate partner victim	-.473	.284	.623
Initial assignment to DV caseload	.986 ***	.242	2.680
Decrease in supervision	-1.750 ***	.425	.174
Increase in supervision	2.121 ***	.322	8.339
Prior drug or alcohol treatment	.004	.252	1.004
Unemployed	.724 **	.270	2.063
Separated from victim in past six months	.371	.223	1.449
Vocational/Financial category score	.164	.113	1.179
Drug Abuse category score	.366 ***	.095	1.442
Constant	-1.195	.377	
-2 Log Likelihood	564.956		
χ^2	218.284 ***		
Nagelkerke R^2	.427		

*p<.05. **p<.01. ***p<.001.

PTR filed for technical violations only. For the probation outcome PTR filed for technical violations only, Model 5 contains eight variables, which are presented in Table 5.25. All eight variables were also included in Model 5 for the outcome PTR filed. The variables include: 1) married; 2) three or more prior juvenile; 3) current felony offense; 4) initial assignment to specialized domestic

violence caseload; 5) decrease in supervision; 6) increase in supervision; 7) prior drug or alcohol treatment; and 8) unemployed. None of the variables from the initial OST/FROST are included in the model. None of the variables are strongly correlated with each other.

The χ^2 value for Model 5 for the probation outcome PTR filed for technical violations of only is statistically significant ($\chi^2 = 74.103$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 18.1% of the variation in PTR filed for technical violations only. This represents the greatest amount of variation explained for the outcome PTR filed for technical violations only. Five variables are significant predictors. Being married decreases the likelihood of having a PTR filed for technical violations by half (Exp(B)=.537). An initial assignment to the specialized domestic violence caseload increases the likelihood of a PTR being filed for technical violations by 2.7 times (Exp(B)=2.68). An increase in supervision increases the likelihood of a PTR for technical violations by 2.1 times (Exp(B)=1.245) compared to those who have no change in supervision or a decrease in supervision. A decrease in supervision reduces the likelihood of a PTR for technical violations by 33.8% (Exp(B)=.338) compared to those with no change in supervision or an increase in supervision. Finally, being unemployed increases the likelihood of a PTR for technical violations by 85.5% (Exp(B)=1.855).

Table 5.25

Logistic Regression Model 5 for PTR Filed for Technical Violations (N=573)

	PTR filed – technical violations only		
	B	SE	Exp(B)
Married	-.623 *	.274	.537
3+ prior adjudications/convictions	.184	.230	1.202
Current felony offense	.058	.252	1.059
Initial assignment to DV caseload	.978 ***	.237	2.658
Decrease in supervision	-1.084 *	.464	.338
Increase in supervision	.763 **	.253	2.145
Prior drug or alcohol treatment	.357	.236	1.429
Unemployed	.618 **	.218	1.855
Constant	-2.092	.264	
-2 Log Likelihood	560.825		
χ^2	74.103 ***		
Nagelkerke R^2	.181		

*p<.05. **p<.01. ***p<.001.

PTR filed for a violation of DV conditions. Eleven variables from Model 1 through Model 4 are significant predictors of PTR filed for a violation of DV conditions. Nine of the 11 variables are also significant predictors of PTR filed. Those that differ are age at sentence and prior arrests for assault, menacing or harassing. None of the variables are strongly correlated with each other. The χ^2 value is statistically significant (χ^2 = 176.462, p<.001). The Nagelkerke R^2 value indicates that the model explains 35.8% of the variation in PTR filed for a violation of DV conditions. Eight variables are significant predictors and are presented in Table 5.26. Individuals who are married are 57.1% (Exp(B)=.571) less likely to have a PTR filed for a violation of DV conditions compared to those who are not married. A decrease in supervision also results in a 16.3% (Exp(B)=.163) decrease in the likelihood of PTR for a violation of DV conditions,

compared to those with no change in supervision or an increase in supervision. The strongest predictor is an initial assignment to a specialized domestic violence caseload which increases the likelihood of a PTR for a violation of DV conditions by 2.8 times (Exp(B)=2.820). Prior arrests for assault, menacing or harassing, being unemployed, or separating from the victim in the past six months (at the time of the offense) all increase the likelihood of a PTR for a violation of DV conditions. Finally, each one point increase in the drug abuse category score of the OST/FROST increases the likelihood of a PTR for a violation of DV conditions by 34.4% (Exp(B)=1.344.

Table 5.26

Logistic Regression Model 5 for PTR Filed for Violation of DV Conditions (N=573)

	PTR filed - violation of DV conditions		
	B	SE	Exp(B)
Married	-.561 *	.250	.571
Age at sentence	-.020	.011	.980
Initial assignment to DV caseload	1.037 ***	.231	2.820
Decrease in supervision	-1.812 ***	.478	.163
Increase in supervision	1.431 ***	.266	4.185
Prior arrests for assault, menacing or harassing	.430 *	.219	1.537
Prior drug or alcohol treatment	.250	.239	1.283
Unemployed	.678 **	.250	1.971
Separated from victim in past six months	.540 *	.215	1.717
Vocational/financial category score	.147	.106	1.159
Drug abuse category score	.296 ***	.089	1.344
Constant	-1.576 ***	.434	
-2 Log Likelihood	595.453		
χ^2	176.462 ***		
Nagelkerke R^2	.358		

*p<.05. **p<.01. ***p<.001.

PTR filed for victim contact. Ten variables from Model 1 through Model 4 are significant predictors of PTR filed for victim contact. Two of the significant predictors have not been identified as predictors of the other probation outcomes discussed so far. These include number of victim contacts and being on community supervision at the time of the current offense. None of the variables are strongly correlated with each other. The strongest correlation among variables is .416 between initial assignment to a specialized domestic violence caseload and three or more prior juvenile adjudications or adult convictions. The χ^2 value for Model 5 for the probation outcome PTR filed for victim contact is statistically significant ($\chi^2 = 69.303$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 18.7% of the variation in PTR filed for victim contact. Six variables are significant predictors and are presented in Table 5.27. Having a juvenile victim and a decrease in supervision both decrease the likelihood of having a PTR filed for victim contact. The strongest predictor is an increase in supervision. Individuals with an increase in supervision are 90.3% (Exp(B)=1.903) more likely to have a PTR filed for victim contact compared to those with no change or a decrease in supervision. There is an increased likelihood of having a PTR filed for victim contact for individuals who have had prior drug or alcohol treatment and for individuals who are unemployed. Finally, for each additional contact between the victim and the probation officer, there is a 6.1% (Exp(B)=1.061) increase in the likelihood of having a PTR filed for victim contact.

Table 5.27

Logistic Regression Model 5 for PTR Filed for Victim Contact (N=565)

	PTR filed – victim contact		
	B	SE	Exp(B)
3 + prior adjudications or convictions	.011	.263	1.011
Juvenile victim	-.844 *	.401	.430
Initial assignment to DV caseload	.494	.293	1.639
Decrease in supervision	-1.808 *	.744	.164
Increase in supervision	.643 *	.270	1.903
# of victim contacts	.059 **	.022	1.061
Prior drug or alcohol treatment	.566 *	.258	1.762
Unemployed	.487 *	.244	1.627
Separated from victim in past six months	.346	.248	1.413
On community supervision at the time of offense	.501	.317	1.650
Constant	-2.526 ***	.284	
-2 Log Likelihood	473.250		
χ^2	69.303 ***		
Nagelkerke R^2	.187		

*p<.05. **p<.01. ***p<.001.

PTR filed for a new crime. Table 5.28 presents the results of Model 5 for the probation outcome PTR filed for a new crime. Eight variables from Model 1 through Model 4 are significant predictors of PTR filed for a new crime and are included in the model. Being on probation for multiple charges is a significant predictor for the first time. The χ^2 value is statistically significant (χ^2 = 77.155, p<.001). The Nagelkerke R^2 value indicates that the model explains 18.4% of the variation in PTR filed for a new crime. This is the greatest amount of variation that has been explained for this outcome by any of the models.

Six of the eight variables in the model remain significant predictors. For each additional year older, there is a 97.2% (Exp(B)=.972) decrease in the

Table 5.28

Logistic Regression Model 5 for PTR Filed for New Crime (N=573)

	PTR filed – new crime		
	B	SE	Exp(B)
Age at sentence	-.028 **	.011	.972
Multiple charges	.379	.216	1.460
Decrease in supervision	-1.422 *	.611	.241
Increase in supervision	.959 ***	.236	2.608
Unemployed	.241	.247	1.273
Separated from victim in past six months	.478 *	.217	1.613
On community supervision at time of offense	.623 *	.280	1.864
Vocational/financial category score	.234 *	.103	1.264
Constant	-1.171 **		
-2 Log Likelihood	581.693		
χ^2	77.155 ***		
Nagelkerke R^2	.184		

*p<.05. **p<.01. ***p<.001.

likelihood of having a PTR filed for a new crime. There is also a decrease in the likelihood of having a PTR filed for a new crime for individuals with a decrease in supervision (Exp(B)=.241) compared to those who have no change or an increase in supervision. Individuals with an increase in supervision are 2.6 times (Exp(B)=2.608) more likely to have a PTR filed for a new crime compared to those with no change or a decrease in supervision. There is also an increase in the likelihood of a PTR for a new crime for individuals who separated from the victim within the past six months (at the time of the assessment) (Exp(B)=1.613) and for those on community supervision at the time of the offense (Exp(B)=1.864). Finally, for each one point increase in the vocational/financial

category score of the OST/FROST, there is a 26.4% (Exp(B)=1.264) increase in the likelihood of having a PTR filed for a new crime.

PTR filed for a new DV offense. Seven variables are significant predictors of the probation outcome PTR filed for a new DV offense. Six of the seven variables have been identified as significant predictors of one or more probation outcomes discussed thus far. The additional variable that is a significant predictor of PTR filed for a new DV offense is being on probation for domestic violence offenses only. None of the variables are strongly correlated with each other. The χ^2 value for Model 5 for the probation outcome PTR filed for a new DV offense is statistically significant ($\chi^2 = 36.699$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 12.0% of the variation in PTR filed for a new DV offense. As with the other probation outcomes, Model 5 explains more of the variation in PTR filed for a new DV offense than Models 1 through 4. The results of Model 5 are presented in Table 5.29.

Four variables remain significant predictors. Individuals on probation for multiple charges are 2.1 times (Exp(B)=2.137) more likely to have a PTR filed for a new DV offense than those on probation for a single charge. Individuals on probation for domestic violence offenses only are 2.6 times (Exp(B)=2.625) more likely to have a PTR filed for a new DV offense. Individuals who have an increase in supervision are 2.9 times (Exp(B)=2.850) more likely to have a PTR filed for a new DV offense compared to those who have no change or a decrease in supervision. Finally, for each additional contact between the victim and the

probation officer, there is a 5.9% increase in the likelihood of having a PTR filed for a DV offense.

Table 5.29

Logistic Regression Model 5 for PTR Filed for New DV Offense (N=573)

	PTR filed – new DV offense		
	B	SE	Exp(B)
3 + prior adjudications or convictions	.523	.296	1.687
Multiple charges	.760 *	.323	2.137
Domestic violence offenses only	.965 *	.469	2.625
Increase in supervision	1.047 ***	.290	2.850
# of victim contacts	.057 *	.023	1.059
Prior arrests for assault, menacing or harassing	.200	.309	1.222
On community supervision at time of offense	.648	.351	1.912
Constant	-4.017	.562	
-2 Log Likelihood	380.759		
χ^2	36.699 ***		
Nagelkerke R^2	.120		

*p<.05. **p<.01. ***p<.001.

Unsuccessful probation status. The final probation outcome is an unsuccessful probation status. Model 5 includes 18 variables that were identified as significant predictors of unsuccessful probation status across Models 1 through 4. Six of the variables are only significant predictors of unsuccessful probation status. These variables include: 1) initial jail or prison before release to supervision in the community; 2) prior domestic violence treatment; 3) total static score from the OST/FROST; 4) education category score from the OST/FROST; 5) family and social relationships category score from the OST/FROST; and 6) criminal behavior category score from the OST/FROST. None of the variables

are highly correlated. The strongest correlation between variables is .668 between the total static score and the criminal behavior category score of the OST/FROST.

The χ^2 value for Model 5 for the probation outcome unsuccessful probation status is statistically significant (χ^2 = 1989.821, p<.001). The Nagelkerke R^2 value indicates that the model explains 41.1% of the variation in unsuccessful probation status. The results are presented in Table 5.30. Ten variables remain significant predictors. Variables resulting in a decreased likelihood of an unsuccessful probation status include age at sentence, having a juvenile victim, having a decrease in supervision, and having prior domestic violence treatment. Variables resulting in an increase in the likelihood of an unsuccessful probation status include having three or more prior juvenile adjudications or adult convictions, being initially assigned to the specialized domestic violence caseload, having an increase in supervision, and being unemployed. Two categories from the OST/FROST are also significant predictors. For each additional point increase in the family and social relationships category score there is a 34.8% (Exp(B)=1.348) increase in the likelihood of an unsuccessful probation status. For each additional point increase in the drug abuse category score there is a 30.1% (Exp(B)=1.301) increase in the likelihood of an unsuccessful probation status.

Table 5.30

Logistic Regression Model 5 for Unsuccessful Probation Status (N=565)

	Unsuccessful probation status		
	B	SE	Exp(B)
Age at sentence	-.023***	.012	.977
3 + prior adjudications or convictions	.901**	.292	2.462
Current felony offense	.145	.283	1.156
Initial jail or prison	.559	.292	1.749
Juvenile victim	-.468**	.343	.380
Intimate partner victim	-.390	.289	.677
Initial assignment to DV caseload	.983***	.273	2.672
Decrease in supervision	-3.489***	1.044	.031
Increase in supervision	1.365***	.269	3.917
# of victim contacts	-.024	.024	.976
Prior domestic violence treatment	-.826*	.362	.438
Unemployed	.768**	.267	2.155
Total Static score	-1.86	.101	.830
Vocational/financial category score	.097	.112	1.102
Education category score	.150	.175	1.162
Family & social relationships category score	.299**	.108	1.348
Drug abuse category score	.263*	.105	1.301
Criminal behavior category score	.129	.107	1.138
Constant	-1.627**	.570	
-2 Log Likelihood	525.417		
χ^2	198.821***		
Nagelkerke R^2	.411		

*p<.05. **p<.01. ***p<.001.

Model 5 summary. Model 5 represents the most parsimonious model for each of the probation outcomes, containing only those variables that retained significance in Model 1 through Model 4. The number of variables included in the model varied for each outcome, ranging from a high of 18 variables in Model 5 for unsuccessful probation status, to a low of seven variables in Model 5 for PTR filed for a new DV offense. The number of variables that retained

significance in Model 5 also varied. Table 5.31 provides an overall summary of Model 5 for each probation outcome, highlighting which types of variables retained significance. Model 1 variables included demographic, criminal history, current offense and victim characteristics. Model 2 included supervision variables. Model 3 included variables from the DVSI and Model 4 included variables from the initial OST/FROST. For each outcome, of the variables that retained significance, the greatest percentage came from Model 2, which included supervision variables. For example, for the probation outcome PTR filed for technical violations only, there are eight variables in Model 5. Of the eight variables, five remained significant predictors. Of the five significant predictors, three (60%) were variables related to supervision. Overall, it appears that variables reflecting the supervision received are the most consistent predictors of probation outcomes. Variables from the OST/FROST are the least likely to retain significance as predictors across probation outcomes.

A similar pattern can be seen when reviewing the amount of variation in the probation outcome that is explained by the model. This information is summarized in Table 5.32. As expected, the Nagelkerke R^2 value is highest for Model 5 for each probation outcome, indicating that Model 5, which contained only those variables that remain significant predictors from each model, explains more variation in probation outcomes than any other model. For example, Model 5 explains 42.7% of the variation in the outcome of PTR filed. The amount of variation in PTR filed explained by the other models ranged from 18.2% for Model 4 to 29.1% for Model 2. Among Models 1 through Model 4, Model 2,

Table 5.31

Types of Variables Retaining Significance in Model 5 by Probation Outcome

Variable	PTR filed	PTR filed – technical violations only	PTR filed – violation of DV conditions	PTR filed – victim contact	PTR filed – new crime	PTR filed – new DV offense	Unsuccessful probation status
# of variables in Model 5	13	8	11	10	8	7	18
# of variables retaining significance	8	5	8	6	6	4	10
Significant variables from Model 1	3 (37.5%)	1 (20.0%)	1 (12.5%)	1 (16.7%)	1 (16.7%)	2 (50.0%)	3 (30.0%)
Significant variables from Model 2	3 (37.5%)	3 (60.0%)	3 (37.5%)	3 (50.0%)	2 (33.3%)	2 (50.0%)	3 (30.0%)
Significant variables from Model 3	1 (12.5%)	1 (20.0%)	3 (37.5%)	2 (33.3%)	2 (33.3%)	0	2 (20.0%)
Significant variables from Model 4	1 (12.5%)	0	1 (12.5%)	0	1 (16.7%)	0	2 (20.0%)

Table 5.32

Percent of Variation in Probation Outcomes Explained by Each Model, Nagelkerke R^2

Probation outcome	Model 1 R^2	Model 2 R^2	Model 3 R^2	Model 4 R^2	Model 5 R^2
PTR filed	19.2	29.1	19.5	18.2	42.7
PTR filed technical violations only	11.5	16.7	10.5	5.7	18.1
PTR filed violation of DV conditions	13.8	23.9	19.3	15.8	35.8
PTR filed victim contact	7.8	14.1	9.3	7.7	18.7
PTR filed new crime	12.1	11.6	8.3	10.9	18.4
PTR filed new DV offense	8.7	10.3	7.4	2.7	12.0
Unsuccessful probation status	21.8	34.3	19.5	16.9	41.1

which includes variables related to supervision, explained the greatest amount of variation for each probation outcome.

Initial Caseload Assignment

The significance of the supervision variables merits some additional attention. The sample characteristics presented in Chapter 3 identified significant differences between individuals initially assigned to the specialized domestic violence caseloads and individuals initially assigned to standard probation caseloads. These differences are not surprising as the DVSI is used to determine who should receive specialized supervision. At a minimum, it is anticipated that individuals initially assigned to the specialized domestic violence caseloads are higher risk on the DVSI. The analysis shows that this is in fact true. In addition to having a higher average DVSI score, they also have a higher initial OST/FROST score and a higher percentage of those assigned to the DV caseloads are male, have a criminal history, on currently on probation for a felony, spent some initial time in jail or prison prior to being supervised in the community, and have female victims, adult victims and intimate partner victims. A higher percentage of individuals assigned to standard probation caseloads are female, have male victims, juvenile victims and victims that are immediate family members.

The initial caseload assignment is also found to be a significant predictor of a number of probation outcomes. For the probation outcomes PTR filed, PTR filed for technical violations only, PTR filed for a violation of DV conditions, and unsuccessful probation status, individuals initially assigned to the specialized DV

caseload are over two times more likely to fail, or have a negative probation outcome. Because of the significance of the initial caseload assignment, separate logistic regression models are created for those initially assigned to the specialized domestic violence caseloads and those initially assigned to standard probation to determine if different risk factors are predictive of probation outcomes. Three probation outcomes were selected for the analysis, having a PTR filed, having a PTR filed for a new crime, and unsuccessful probation status.

Initial Assignment to Specialized Domestic Violence Caseloads

Prior to developing the logistic regression models, the bivariate correlations between the independent variables and the probation outcome measures were identified to determine which variables are significantly related to probation outcomes for individuals initially assigned to the specialized DV caseloads. Table 5.33 presents only the variables that are significantly correlated with at least one of the probation outcomes. The strongest correlations are those associated with supervision variables.

Similar to the analyses conducted with the entire sample, five separate logistic regression models are created for each outcome. Model 1 includes demographic, criminal history, current offense and victim characteristic variables. Model 2 includes supervision variables. Model 3 includes significant items from the DVSI and Model 4 includes significant variables from the initial OST/FROST. For each probation outcome, Model 5 includes the variables that remain significant in Models 1 through 4.

Table 5.33

Correlations Between Independent Variables and Probation Outcome: Individuals Initially Assigned to Specialized Domestic Violence Caseloads (n=243)

Variable	PTR Filed	PTR Filed – New Crime	Unsuccessful Probation Status
Female	-.076	-.129*	-.194**
Age at time of sentence	-.178**	-.203***	-.222***
3+ prior juvenile adjudications/ adult convictions	.178**	.096	.188**
Prior probation/ parole revocation	.153*	.082	.227***
Multiple charges	.133*	.067	.023
DV offenses only	-.180**	-.056	-.128*
Initial jail or prison	.020	-.112	.136*
Juvenile victim	-.130*	-.009	-.185*
Decrease in supervision	-.406***	-.250***	-.339***
Increase in supervision	.269***	.114	.209***
# days on initial assignment	-.226***	-.022	-.499***
Total contacts	-.114	-.095	-.449***
Total face-to-face contacts	-.122	-.097	-.444***
Total victim contacts	-.004	.072	-.162*
Average contacts per month	-.004	-.065	-.177**
DVSI – Unemployed	.276***	.146*	.306***
DVSI – On community supervision at time of offense	.101	.143*	.131*
Initial OST/FROST score	.205***	.122	.205***
Vocational/financial category	.161*	.163*	.136*
Education category	.079	-.031	.131*
Family & social relationships category	.130*	.019	.200**
Drug abuse category	.209***	.148*	.164*
Static total	.148*	.079	.124
Dynamic total	.188**	.119	.207***

*p<.05. **p<.01. ***p<.001.

Model 1. Model 1 includes eight variables that are significantly related to probation outcomes. They include: 1) gender; 2) age at sentence; 3) three or more prior juvenile adjudications or adult convictions; 4) prior probation or parole revocations; 5) on probation for multiple charges; 6) on probation for domestic

violence offenses only; 7) initial jail or prison before release to the community; and 8) juvenile victim.

PTR filed. The χ^2 value for Model 1 for the probation outcome PTR filed is statistically significant (χ^2 =31.869, p<.001), indicating that the model is a significant improvement over the intercept-only model. The Nagelkerke R^2 value indicates that the model explains 17.1% of the variation in PTR filed for individuals initially assigned to the specialized domestic violence caseloads. The results of the logistic regression model are presented in Table 5.34. Only two items are significant predictors, age at sentence and three or more prior juvenile adjudications or adult convictions. For each year increase in age, there is a 96.1% (Exp(B)=.961) decrease in the likelihood of having a PTR filed. Individuals with three or more prior juvenile adjudications or adult convictions are 2.2 times (Exp(B)=2.229) more likely to have a PTR filed.

PTR filed for a new crime. The results of the logistic regression Model 1 for the probation outcome PTR filed for a new crime are presented in Table 5.34. The χ^2 value is statistically significant (χ^2 =20.384, p<.01). The Nagelkerke R^2 value indicates that the model explains 11.8% of the variation in PTR filed for a new crime for individuals initially assigned to the specialized domestic violence caseloads. Only one variable is a significant predictor. For each year increase in age, there is a 95.5% (Exp(B)=.955) decrease in the likelihood of having a PTR filed for a new crime.

Unsuccessful probation status. The results of Model 1 for the probation outcome unsuccessful probation status are presented in Table 5.34. The χ^2 value

Table 5.34

Logistic Regression Model 1: Individuals Initially Assigned to Specialized Domestic Violence Caseloads

	PTR Filed			PTR Filed for New Crime			Unsuccessful Probation Status		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Gender – Female	-.046	.517	.955	-1.312	.788	.269	-1.307	.686	.271
Age at sentence	-.040**	.015	.961	-.046**	.017	.955	-.065***	.016	.939
3+ prior juvenile adjudications or adult convictions	.802**	.310	2.229	.371	.333	1.450	.608	.318	1.837
Prior probation/ parole revocations	.600	.457	1.822	.362	.403	1.437	1.114**	.430	3.047
Multiple charges	.188	.402	1.207	.323	.427	1.381	-.610	.423	.543
DV offenses only	-1.160	.593	.314	-.017	.520	.983	-1.138*	.535	.321
Initial jail or prison	.201	.356	1.223	-.680	.398	.506	.913*	.366	2.491
Juvenile victim	-.872	.465	.418	.098	.507	1.103	-1.531*	.599	.216
Constant	2.390	.852		.359	.853		2.528**	.842	
-2 Log Likelihood		280.419			263.199			273.620	
χ^2		31.869***			20.384**			55.857***	
Nagelkerke R^2		.171			.118			.279	

*p<.05. **p<.01. ***p<.001.

is statistically significant (χ^2 =55.857, p<.001). The Nagelkerke R^2 value indicates that the model explains 27.9% of the variation in unsuccessful probation status for individuals initially assigned to the specialized domestic violence caseloads. Five items are significant predictors. As with the probation outcomes PTR filed and PTR filed for a new crime, age at sentence is a significant predictor. For each year increase in age, there is a 93.9% (Exp(B)=.939) decrease in the likelihood of having an unsuccessful probation outcome. Individuals who have juvenile victims are 21.6 % (Exp(B)=.216) less likely to have an unsuccessful probation status compared to those without juvenile victims. Individuals on probation for domestic violence offenses only are 32.1% (Exp(B)=.321) less likely to have an unsuccessful probation status compared to individuals on for other types of offenses in addition to domestic violence offenses. Individuals who spend some initial time in jail or prison before release to the community are over two times (Exp(B)=2.491) more likely to have an unsuccessful probation status. Individuals who have prior probation or parole revocations are three times (Exp(B)=3.047) more likely to have an unsuccessful probation status.

Model 2. Six supervision variables are included in Model 2 based on significant correlations with probation outcomes. The variables include 1) decrease in supervision; 2) increase in supervision; 3) number of days on initial caseload assignment; 4) total number of contacts; 5) total victim contacts; and 6) average number of contacts per month. Although the total number of face-to-face

contacts is significantly correlated with probation outcomes, it was dropped from the model because of a strong correlation (.994) with the total number of contacts.

PTR filed. Table 5.35 presents the results of Model 2 for the probation outcome PTR filed. The χ^2 value for Model 2 is statistically significant (χ^2 =69.224, p<.001). The Nagelkerke R^2 value indicates that the model explains 34.0% of the variation in PTR filed for individuals initially assigned to the specialized domestic violence caseloads. Two items are significant predictors. Individuals who have a decrease in supervision are 10% (Exp(B)=.100) less likely to have a PTR filed compared to individuals with no change or an increase in supervision. Individuals who have an increase in supervision are 26 time (Exp(B)=26.346) more likely to have a PTR filed than those with no change or a decrease in supervision.

PTR filed for a new crime. The χ^2 value for Model 2 for the probation outcome PTR filed for a new crime is statistically significant (χ^2 =30.992, p<.001), indicating that the model is a significant improvement over the intercept-only model. The Nagelkerke R^2 value indicates that the model explains 17.2% of the variation in PTR filed for a new crime. However, none of the variables in the model is a significant predictor. This is presented in Table 5.35.

Unsuccessful probation status. Table 5.35 also presents the results of Model 2 for the probation outcome unsuccessful probation status. The χ^2 value is statistically significant (χ^2 =143.150, p<.001). The Nagelkerke R^2 value indicates that the model explains 59.5% of the variation in unsuccessful probation status. Four variables are significant predictors. Individuals who have a decrease in

Table 5.35

Logistic Regression Model 2: Individuals Initially Assigned to Specialized Domestic Violence Caseloads

	PTR Filed			PTR Filed for New Crime			Unsuccessful Probation Status		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Decrease in supervision	-2.304***	.538	.100	-20.192	6976.540	.000	-3.396**	1.078	.034
Increase in supervision	3.271**	1.250	26.346	.877	.450	2.404	2.769***	.844	15.947
# days on initial caseload assignment	.000	.001	1.000	.000	.001	1.000	-.002**	.001	.998
Total client contacts	-.016	.008	.984	-.010	.007	.900	-.037***	.010	.963
Total victim contacts	.007	.025	1.007	.034	.024	1.035	.028	.033	1.028
Average contacts per month	.080	.189	1.084	-.015	.157	.985	.127	.199	1.136
Constant	1.403**	.444		-.775*	.386		2.162**	.494	
-2 Log Likelihood		247.781			258.977			191.902	
χ^2		69.224***			30.992***			143.150***	
Nagelkerke R^2		.340			.172			.595	

*p<.05. **p<.01. ***p<.001.

supervision are 3.4% (Exp(B)=.034) less likely to have an unsuccessful probation status compared to those who have no change or an increase in supervision. Individuals who have an increase in supervision are almost 16 times (Exp(B)=15.947) more likely to have an unsuccessful probation status compared to those who have no change or a decrease in supervision. Contacts are also significant predictors. For each additional contact between the probation officer and the client, there is a 99.8% (Exp(B)=.998) decrease in the likelihood of an unsuccessful probation status. For each additional contact with the probation officer and the victim, there is a 96.3% (Exp(B)=.963) decrease in the likelihood of an unsuccessful probation status.

Model 3. Model 3 includes items from the DVSI that are significantly correlated with the probation outcomes. For individuals initially assigned to the specialized DV caseloads, only two DVSI items are significantly correlated with outcomes. The first is being unemployed. The second is being on community supervision at the time of the offense. The logistic regression analyses for Model 3 for each of the probation outcomes are presented in Table 5.36.

PTR filed. The χ^2 value for Model 3 for the probation outcome PTR filed is statistically significant (χ^2 =21.213, p<.001). The Nagelkerke R^2 value indicates that the model explains 11.5% of the variation in PTR filed for individuals initially assigned to the specialized domestic violence caseloads. There is one significant predictor in the model. Individuals who are unemployed

Table 5.36

Logistic Regression Model 3: Individuals Initially Assigned to Specialized Domestic Violence Caseloads

	PTR Filed			PTR Filed for New Crime			Unsuccessful Probation Status		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
DVSI – unemployed	1.206***	.286	3.340	.671*	.299	1.956	1.305***	.279	3.687
DVSI – on community supervision at time of offense	.511	.332	1.667	.688*	.314	1.990	.634*	.311	.1885
Constant	-.122	.205		-1.500	.251		-1.042	.226	
-2 Log Likelihood		295.792			279.997			307.651	
χ^2		21.213***			9.973**			27.402***	
Nagelkerke R^2		.115			.058			.143	

*p<.05. **p<.01. ***p<.001.

are over three times (Exp(B)=3.340) more likely to have a PTR filed than individuals who are employed.

PTR filed for a new crime. The χ^2 value for Model 3 for the probation outcome PTR filed for a new crime is also statistically significant (χ^2 =9.973, p<.01). The Nagelkerke R^2 value indicates that the model explains 5.8% of the variation in PTR filed for a new crime. Both DVSI items in the model are significant predictors. Individuals who are unemployed are almost two times (Exp(B)=1.956) more likely to have a PTR filed for a new crime than individuals who are employed. Individuals who were on community supervision at the time of the offense are also two times (Exp(B)=1.990) more likely to have a PTR filed for a new crime as those who were not on community supervision at the time of the offense.

Unsuccessful probation status. Similar results are found for Model 3 for the probation outcome unsuccessful probation status. The χ^2 value is statistically significant (χ^2 =27.402, p<.001). The Nagelkerke R^2 value indicates that the model explains 14.3% of the variation in unsuccessful probation status. Individuals who are unemployed are 3.7 times (Exp(B)=3.687) more likely to have an unsuccessful probation status compared to those who are employed. Individuals who were on community supervision at the time of the offense are almost two times (Exp(B)=1.885) more likely to have an unsuccessful probation status.

Model 4. Model 4 includes variables from the initial OST/FROST assessment that are significantly correlated with probation outcomes. The initial

OST/FROST score and the static total and dynamic total are all significantly correlated with outcomes. The total score was dropped from the model because it is strongly correlated with both the static total (.788) and the dynamic total (.876). The OST/FROST categories that are significantly correlated with probation outcomes for those initially assigned to the specialized DV caseloads include vocational/financial, education, family and social relationships, and drug abuse. Table 5.37 presents the results of the logistic regression analyses for Model 4 for each probation outcome.

PTR filed. The χ^2 value for Model 4 for the probation outcome PTR filed is statistically significant (χ^2 =20.385, p<.001). The Nagelkerke R^2 value indicates that the model explains 11.0% of the variation in PTR filed for individuals initially assigned to the specialized domestic violence caseloads. Two of the OST/FROST categories are significant predictors. For each one point increase in the vocational/financial category score of the OST/FROST, there is a 40.3% (Exp(B)=1.403) increase in the likelihood of having a PTR filed. For each one point increase in the drug abuse category score of the OST/FROST there is a 47.5% (Exp(B)=1.475) increase in the likelihood of having a PTR filed.

PTR filed for a new crime. The χ^2 value for the probation outcome PTR filed for a new crime is statistically significant (χ^2 =13.307, p<.05). The Nagelkerke R^2 value indicates that the model explains 7.6% of the variation in PTR filed for a new crime. Only one OST/FROST category is a significant predictor. For each one point increase in the vocational/financial category of the

Table 5.37

Logistic Regression Model 4: Individuals Initially Assigned to Specialized Domestic Violence Caseloads

	PTR Filed			PTR Filed for New Crime			Unsuccessful Probation Status		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Static total	.019	.081	1.019	.081	.085	1.084	-.074	.078	.928
Dynamic total	-.025	.076	.975	.000	.079	.999	-.013	.073	.987
Vocational/financial	.338*	.160	1.403	.334*	.157	1.397	.215	.148	1.240
Education	.112	.242	1.118	-.259	.257	.772	.289	.231	1.336
Family & social relationships	.131	.139	1.140	-.072	.140	.930	.292*	.133	1.339
Drug abuse	.389**	.148	1.475	.228	.140	1.257	.291*	.134	1.338
Constant	-.340	.433		-1.559***	.452		-1.132**	.418	
-2 Log Likelihood		296.620			276.663			315.137	
χ^2		20.385**`			13.307*			19.915**	
Nagelkerke R^2		.110			.076			.105	

*p<.05. **p<.01. ***p<.001.

OST/FROST, there is a 39.7% (Exp(B)=1.397) increase in the likelihood of having a PTR filed for a new crime.

Unsuccessful probation status. Model 4 is also significant for the probation outcome unsuccessful probation status (χ^2 =.19.915, p<.01). The Nagelkerke R^2 value indicates that the model explains 10.5% of the variation in unsuccessful probation status. Two of the OST/FROST categories are significant predictors. For each one point increase in the family and social relationships category score there is a 33.9% (Exp(B)=1.339) increase in the likelihood of an unsuccessful probation status. For each one point increase in the drug abuse category of the OST/FROST there is a 33.8% (Exp(B)=1.338) increase in the likelihood of an unsuccessful probation status.

Model 5. Model 5 differs for each probation outcome and includes only those variables that remain significant predictors in Model 1 through Model 4.

PTR filed. Seven variables are included in Model 5. This model is presented in Table 5.38. The χ^2 value for Model 5 for the probation outcome PTR filed is statistically significant (χ^2 =79.863, p<.001). The Nagelkerke R^2 value indicates that the model explains 38.4% of the variation in PTR filed for individuals initially assigned to the specialized domestic violence caseloads. Six of the seven variables remain significant predictors. Only the vocational/financial category score from the OST/FROST is no longer significant. For each year increase in age, there is a 96.8% (Exp(B)=.968) decrease in the likelihood of having a PTR filed. Individuals who have a decrease in supervision are also less

Table 5.38

Logistic Regression Model 5 for PTR Filed: Individuals Initially Assigned to Specialized Domestic Violence Caseloads

	PTR Filed		
	B	SE	Exp(B)
Age at sentence	-.033*	.016	.968
3+ prior juvenile adjudications or adult convictions	.714*	.325	2.041
Decrease in supervision	-2.391***	.537	.092
Increase in supervision	1.826*	.764	6.210
DVSI – unemployed	1.044**	.399	2.840
Vocational/financial	-.084	.170	.919
Drug abuse	.305*	.145	1.356
Constant	.800	.664	
-2 Log Likelihood	237.141		
χ^2	79.863***		
Nagelkerke R^2	.384		

*p<.05. **p<.01. ***p<.001.

likely (Exp(B)=.092) to have a PTR filed compared to those with no change or an increase in supervision. Individuals with three or more prior juvenile adjudications or adult convictions are two times (Exp(B)=2.041) more likely to have a PTR filed. Individuals who are employed are almost three times (Exp(B)=2.840) more likely to have a PTR filed than individuals who are employed. Individuals who have an increase in supervision are 6.2 times (Exp(B)=6.210) more likely to have a PTR filed than those with no change or a decrease in supervision. Finally, each one point increase in the drug abuse category score of the OST/FROST increases the likelihood of having a PTR filed by 35.6% (Exp(B)=1.356).

PTR filed for a new crime. Four items are included in Model 5 for the probation outcome PTR filed for a new crime. The results are presented in Table 5.39. The χ^2 value for Model 5 is statistically significant (χ^2 =19.830, p<.001). The Nagelkerke R^2 value indicates that the model explains 11.2% of the variation in PTR filed for a new crime. Only age at sentence remains a significant predictor. For each one year increase in age there is a 95.6% (Exp(B)=.956) decrease in the likelihood of having a PTR filed for a new crime.

Table 5.39

Logistic Regression Model 5 for PTR Filed for a New Crime: Individuals Initially Assigned to Specialized Domestic Violence Caseloads

	PTR Filed – New Crime		
	B	SE	Exp(B)
Age at sentence	-.045**	.017	.956
DVSI – unemployed	.422	.357	1.525
DVSI – on community supervision at time of offense	.620	.322	1.859
Vocational/financial	-.085	.146	1.160
Constant	-.085	.616	
-2 Log Likelihood	270.140		
χ^2	19.830***		
Nagelkerke R^2	.112		

*p<.05. **p<.01. ***p<.001.

Unsuccessful probation status. Model 5 for the probation outcome unsuccessful probation status includes 13 variables that remained significant predictors in Models 1 through 4. The results are presented in Table 5.40. The χ^2 value is statistically significant (χ^2 =174.734, p<.001). The Nagelkerke R^2 value indicates that the model explains 69.3% of the variation unsuccessful probation

Table 5.40

Logistic Regression Model 5 for Unsuccessful Probation Status: Individuals Initially Assigned to Specialized Domestic Violence Caseloads

	Unsuccessful Probation Status		
	B	SE	Exp(B)
Age at sentence	-.068**	.024	.934
Prior probation/parole revocations	.833	.619	2.299
DV offenses only	-1.001	.676	.368
Initial jail or prison	1.195*	.550	3.304
Juvenile victim	-1.849*	.787	.157
Decrease in supervision	-3.353**	1.093	.035
Increase in supervision	2.489*	.977	12.046
# days on initial caseload assignment	-.002**	.001	.998
Total client contacts	-.032***	.007	.968
DVSI – unemployed	.712	.437	2.037
DVSI – on community supervision at time of offense	.073	.511	.929
Family & social relationships	.177	.164	1.194
Drug abuse	.043	.194	1.044
Constant	4.716***	1.359	
-2 Log Likelihood	154.743		
χ^2	174.734***		
Nagelkerke R^2	.693		

*p<.05. **p<.01. ***p<.001.

status for individuals initially assigned to the specialized domestic violence caseloads. Seven variables remain significant predictors. For each year increase in age there is a 93.4% (Exp(B)=.934) decrease in the likelihood of an unsuccessful probation status. Individuals who have a decrease in supervision are 3.5% (Exp(B)=.035) less likely to have an unsuccessful probation status compared to those who have no change or an increase in supervision. Individuals who have an increase in supervision are over 12 times (Exp(B)=12.046) more

likely to have an unsuccessful probation status compared to those who have no change or a decrease in supervision. For each additional day on the initial caseload assignment, there is a 99.8% (Exp(B)=.998) decrease in the likelihood of having an unsuccessful probation status. Each additional contact between the probationer and the probation officer also decreases the likelihood of an unsuccessful probation status (Exp(B)=.968). Having a juvenile victim decreases the likelihood of an unsuccessful probation status by 15.7% (Exp(B)=.157). Finally, individuals who spend some initial time in jail or prison before release to the community are 3 times (Exp(B)=3.304) more likely to have an unsuccessful probation status.

Initial Assignment to Standard Probation Caseloads

The significant correlations between the independent variables and the probation outcome measures for individuals initially assigned to standard probation caseloads are presented in Table 5.41. There are some differences in the variables that are significant for individuals initially assigned to standard probation caseloads compared to those that are significant for individuals initially assigned to specialized domestic violence caseloads. There are four variables that area significant related to probation outcomes for those initially assigned to specialized DV caseloads that are not significant for those initially assigned to standard probation. The variables include: 1) gender; 2) initial jail or prison before release to the community; 3) juvenile victim; and 4) on community supervision at the time of the offense. There are 11 variables significantly related to probation outcomes for individuals initially assigned to standard probation

Table 5.41

Correlations Between Independent Variables and Probation Outcome: Individuals Initially Assigned to Standard Probation Caseloads (n=330)

Variable	PTR Filed	PTR Filed – New Crime	Unsuccessful Probation Status
Married	-.208***	-.135*	-.150**
Age at sentence	-.136*	-.135*	-.103
< 17 at time of first arrest	.139*	.202**	.119*
3+ prior juvenile adjudications/ adult convictions	.103	.083	.152**
Prior felony conviction	.113*	.141**	.149**
Prior probation/parole revocations	.152**	.158**	.093
Prior violent conviction	.049	.112*	.041
Current felony offense	.149**	.105	.167**
Multiple charges	.147**	.145**	.123*
DV offenses only	-.118*	-.054	-.118
# days in custody	.074	.138*	.105
Intimate partner victim	-.096	-.008	-.128*
Decrease in supervision	-.135*	-.078	-.165**
Increase in supervision	.396***	.290***	.337***
# days on initial assignment	.007	.098	-.110*
Total contacts	.164**	.312***	.040
Total face-to-face contacts	.136*	.292***	.045
Total victim contacts	.163**	.174***	.088
Average contacts per month	.058	.195***	.116*
DVSI total score	.176***	.172**	.236***
DVSI – prior arrest for assault, menacing or harassing	.106	.129*	.063
DVSI – unemployed	.290***	.169**	.282***
Initial OST/FROST score	.326***	.237***	.290***
Vocational/financial category	.331***	.230***	.304***
Education category	.214***	.205***	.149**
Family & social relationships category	.143**	.046	.169**
Residence & neighborhood category	.162**	.145**	.158**
Drug abuse category	.264***	.163**	.212***
Criminal behavior category	.162**	.210***	.195***
Static total	.246***	.255***	.237***
Dynamic total	.307***	.175***	.261***

*p<.05. **p<.01. ***p<.001.

caseloads that are not significant for individuals initially assigned to specialized DV caseloads. These variables include: 1) marital status; 2) less than 17 at time of first arrest; 3) prior felony conviction; 4) prior violent conviction; 5) current felony offense; 6) number of days in custody; 7) intimate partner victim; 8) DVSI total score; 9) prior arrests for assault, menacing or harassing; 10) residence and neighborhood category score; and 11) criminal behavior category score. As with those initially assigned to specialized DV caseloads, five different logistic regression models were created to identify the most significant predictors of probation outcomes for those initially assigned to standard probation caseloads.

Model 1. Model 1 includes 12 variables significantly related to probation outcomes from the categories of demographics, criminal history, current offense and victim characteristics. The twelve variables include 1) marital status; 2) age at sentence; 3) less than 17 at time of first arrest; 4) three or more prior juvenile adjudications or adult convictions; 5) prior felony conviction; 6) prior probation/parole revocations; 7) prior violent conviction; 8) current felony offense; 9) multiple charges; 10) domestic violence offenses only; 11) number of days in custody; and 12) intimate partner victim.

PTR filed. The χ^2 value for Model 1 for the probation outcome PTR filed is statistically significant (χ^2 =41.130, p<.001). The Nagelkerke R^2 value indicates that the model explains 16.0% of the variation in PTR filed for individuals initially assigned to standard probation caseloads. This model is presented in Table 5.42. Three variables are significant predictors. Individuals who are married are 38.2% (Exp(B)=.382) less

Table 5.42

Logistic Regression Model 1for PTR Filed and PTR Filed for a New Crime: Individuals Initially Assigned to Standard Probation Caseloads

	PTR Filed			PTR Filed for New Crime		
	B	SE	Exp(B)	B	SE	Exp(B)
Married	-.962**	.298	.382	-.636	.350	.530
Age at sentence	-.012	.014	.988	-.017	.017	.983
< 17 at time of first arrest	.300	.301	1.351	.774*	.326	1.268
3+ prior juvenile adjudications/ adult convictions	.137	.335	1.147	-.167	.372	.846
Prior felony conviction	.291	.440	1.338	.624	.469	1.867
Prior probation/parole revocations	.778	.597	2.177	.373	.593	1.452
Prior violent conviction	-.170	.399	.843	.131	.423	1.140
Current felony offense	.649*	.275	1.913	.480	.324	1.615
Multiple charges	.637*	.316	1.891	.889**	.342	2.432
DV offense only	.018	.407	1.018	.514	.436	1.672
# days in custody	.001	.002	1.001	.004	.002	1.004
Intimate partner victim	-.394	.267	.674	.112	.308	1.119
Constant	-.379	.670		-2.050**	.772	
-2 Log Likelihood	398.155			324.705		
χ^2	41.130***			36.342***		
Nagelkerke R^2	.160			.158		

*p<.05. **p<.01. ***p<.001.

likely to have a PTR filed than those who are unmarried. Individuals with a current felony offense are 91.3% (Exp(B)=1.913) more likely to have a PTR filed. Individuals on offense for multiple charges are 89.1% (Exp(B)=1.891) more likely to have a PTR filed.

PTR filed for a new crime. The χ^2 value for Model 2 for the probation outcome PTR filed for a new crime is also statistically significant (χ^2 =36.342, p<.001). The Nagelkerke R^2 value indicates that the model explains 15.8% of the

variation in PTR filed for a new crime. The results of this model are presented in Table 5.42. Two variables are significant predictors, one of which is also a significant predictor of PTR filed. Individuals on probation for multiple charges are 2.4 times (Exp(B)=2.432) more likely to have a PTR filed for a new crime than individuals on probation for a single offense. Individual who were less than 17 at the time of their first arrest are over two times (Exp(B)=2.168) more likely to have a PTR filed for a new crime than individuals who were 17 or older at the time of their first arrest.

Unsuccessful probation status. The results of Model 1 for unsuccessful probation status are similar to the other probation outcomes and are presented in Table 5.43. The χ^2 value is statistically significant (χ^2 =37.933, p<.001). The Nagelkerke R^2 value indicates that the model explains 16.2% of the variation in unsuccessful probation status. Two variables are significant predictors, which are also significant predictors of PTR filed. Individuals who are married are 47.7% (Exp(B)=.477) less likely to have an unsuccessful probation status compared to those who are married. Individuals on probation for a felony offense are more than two times (Exp(B)=2.244) more likely to have an unsuccessful probation status than those on probation for a misdemeanor.

Model 2. Model 2 includes variables related to supervision. Five variables are included in the model. The total number of face-to-face client contacts and the average number of contacts per month were dropped from the model because they are both strongly correlated with the total number of client

Table 5.43

Logistic Regression Model 1 for Unsuccessful Probation Status: Individuals Initially Assigned to Standard Probation Caseloads

	Unsuccessful Probation Status		
	B	SE	Exp(B)
Married	-.740*	.348	.477
Age at sentence	-.011	.016	.989
< 17 at time of first arrest	.250	.330	1.284
3+ prior juvenile adjudications/ adult convictions	.540	.355	1.716
Prior felony conviction	.827	.457	2.286
Prior probation/parole revocations	-.360	.611	.698
Prior violent conviction	-.422	.440	.656
Current felony offense	.808*	.328	2.244
Multiple charges	.632	.350	1.882
DV offense only	-.112	.429	.894
# days in custody	.002	.002	1.002
Intimate partner victim	-.562	.290	.570
Constant	-1.165	.750	
-2 Log Likelihood		331.969	
χ^2		37.933***	
Nagelkerke R^2		.162	

*p<.05. **p<.01. ***p<.001.

contacts, .982 and .772 respectively. The results of Model 2 are presented in Table 5.44.

PTR filed. The χ^2 value for Model 2 for the probation outcome PTR filed is statistically significant (χ^2 =61.217, p<.001). The Nagelkerke R^2 value indicates that the model explains 22.9% of the variation in PTR filed for individuals initially assigned to standard probation caseloads. Two variables are significant predictors. Individuals who have an increase in supervision are over

nine times (Exp(B)=9.654) more likely to have a PTR filed compared to individuals with no change or a decrease in supervision. For each additional day on the initial caseload assignment, there is a one percent (Exp(B)=1.001) increase in the likelihood of having a PTR filed.

PTR filed for a new crime. Similar results are found for the probation outcome PTR filed for a new crime. The χ^2 value is statistically significant (χ^2 =46.379, p<.001). The Nagelkerke R^2 value indicates that the model explains 19.5% of the variation in PTR filed for a new crime. Three variables are significant predictors, two of which are the same as the predictors of PTR filed. Individuals who have an increase in supervision are 3.7 times (Exp(B)=3.669) more likely to have a PTR filed for a new crime compared to individuals who have no change or a decrease in supervision. For each additional day on the initial caseload assignment, there is a one percent increase (Exp(B)=1.001) in the likelihood of having a PTR filed for a new crime. Finally, for each additional contact between the probation officer and the client, there is a 1.2% (Exp(B)=1.012) increase in the likelihood of a PTR for a new crime.

Unsuccessful probation status. Model 2 for the probation outcome unsuccessful probation status is also statistically significant (χ^2 =48.463, p<.001). The Nagelkerke R^2 value indicates that the model explains 20.1% of the variation in PTR filed for a new crime. Only one variable is a significant predictor. Individuals who have an increase in supervision are over five times (Exp(B)=5.546) more likely to have an unsuccessful probation status compared to individuals with no change or a decrease in supervision.

Table 5.44

Logistic Regression Model 2: Individuals Initially Assigned to Standard Probation Caseloads

	PTR Filed			PTR Filed for New Crime			Unsuccessful Probation Status		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Decrease in supervision	-.577	.579	.562	.069	.662	1.072	-19.937	8195.748	.000
Increase in supervision	2.267***	.383	9.654	1.300**	.364	3.669	1.713***	.343	5.546
# days on initial caseload assignment	.001*	.000	1.001	.001*	.000	1.001	.000	.000	1.000
Total client contacts	-.006	.005	.994	.012*	.005	1.012	-.009	.005	.991
Total victim contacts	.095	.056	1.099	.091	.054	1.095	.018	.053	1.018
Constant	-1.301***	.295		-2.624***	.363		-1.072***	.317	
-2 Log Likelihood		383.769			321.430			328.071	
χ^2		61.217***			46.379***			48.463***	
Nagelkerke R^2		.229			.195			.201	

*p<.05. **p<.01. ***p<.001.

Model 3. Model 3 includes items from the DVSI that are significantly correlated with probation outcomes for individuals initially assigned to standard probation caseloads. Three variables are significantly related including the DVSI total score, prior arrests for assault, menacing or harassing, and employment status (unemployed). Table 5.45 presents the results for Model 3 for each probation outcome.

PTR filed. The χ^2 value for Model 3 for the probation outcome PTR filed is statistically significant (χ^2 =34.363, p<.001). The Nagelkerke R^2 value indicates that the model explains 13.4% of the variation in PTR filed for individuals initially assigned to standard probation caseloads. Only one item is a significant predictor. Individuals who are unemployed are 3.5 times (Exp(B)=3.523) more likely to have a PTR filed than individuals who are employed.

PTR filed for a new crime. Similar results are found for the probation outcome PTR filed for a new crime. The χ^2 value is statistically significant (χ^2 =17.789, p<.001). The Nagelkerke R^2 value indicates that the model explains 7.8% of the variation in PTR filed for a new crime. Individuals who are unemployed are over two times (Exp(B)=2.107) more likely to have a PTR filed for a new crime compared to those who are employed.

Unsuccessful probation status. DVSI variables explain a higher percentage of the outcome unsuccessful probation status compared to the other probation outcomes. The Nagelkerke R^2 value indicates that the model explains 14.6% of the variation in unsuccessful probation status. The χ^2 value for the model

Table 5.45

Logistic Regression Model 3: Individuals Initially Assigned to Standard Probation Caseloads

	PTR Filed			PTR Filed for New Crime			Unsuccessful Probation Status		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
DVSI total score	.053	.048	1.055	.075	.051	1.078	.139**	.053	1.149
DVSI – prior arrests for assault, menacing or harassing	.463	.266	1.589	.522	.291	1.685	.107	.298	1.113
DVSI – unemployed	1.259***	.266	3.523	.745**	.287	2.107	1.155***	.283	3.175
Constant	-1.267***8	.258		-2.000***	.292		-2.288***	.309	
-2 Log Likelihood		410.623			350.020			341.919	
χ^2		34.363***			17.789***			34.615***	
Nagelkerke R^2		.134			.078			.146	

*p<.05. **p<.01. ***p<.001.

is statistically significant (χ^2 =34.615, p<.001). Two variables are significant predictors. Individuals who are unemployed are over three times (Exp(B)=3.175) more likely to have an unsuccessful probation status compared to individuals who are employed. In addition, for each one point increase on the total DVSI score, there is a 14.9% (Exp(B)=1.149) increase in the likelihood of an unsuccessful probation status.

Model 4. Model 4 includes variables related to the initial OST/FROST that are significantly related to probation outcomes for individuals initially assigned to standard probation caseloads. Eight variables are included in the model. The total OST/FROST score was dropped from the model because it is strongly correlated with the total static score (.786) and the total dynamic score (.919). Six of the OST/FROST categories are significantly related to probation outcomes including vocational/financial, education, family and social relationships, residence and neighborhood, drug abuse and criminal behavior. Table 5.46 presents the results of Model 4 for each probation outcome.

PTR filed. The χ^2 value for Model 4 for the probation outcome PTR filed is statistically significant (χ^2 =56.185, p<.001). The Nagelkerke R^2 value indicates that the model explains 21.1% of the variation in PTR filed for individuals initially assigned to standard probation caseloads. Two variables are significant predictors. For each one point increase in the vocational/financial category there is a 73.5% (Exp(B)=1.735) increase in the likelihood of having a

Table 5.46

Logistic Regression Model 4: Individuals Initially Assigned to Standard Probation Caseloads

	PTR Filed			PTR Filed for New Crime			Unsuccessful Probation Status		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Static total	-.043	.122	.957	.174	.133	1.190	-.172	.134	.842
Dynamic total	-.041	.075	.960	-.117	.086	.890	-.131	.085	.877
Vocational/financial	.551***	.149	1.735	.456**	.160	1.577	.627***	.162	1.873
Education	.373	.225	1.451	.467	.239	1.595	.261	.241	1.298
Family & social relationships	.080	.144	1.083	-.178	.161	.837	.300	.160	1.350
Residence & neighborhood	.292	.285	1.340	.456	.303	1.577	.407	.298	1.503
Drug abuse	.356*	.151	1.427	.140	.163	1.150	.376*	.161	1.456
Criminal behavior	.157	.122	1.170	.155	.134	1.168	.360**	.138	1.433
Constant	-1.620***	.364		-1.832***	.392		-2.361***	.418	
-2 Log Likelihood		388.801			326.296			329.524	
χ^2		56.185***			41.513***			47.010***	
Nagelkerke R^2		.211			.176			.195	

*p<.05. **p<.01. ***p<.001.

PTR filed. For each one point increase in the drug abuse category there is a 42.7% (Exp(B)=1.427) increase in the likelihood of having a PTR filed.

PTR filed for a new crime. The χ^2 value is also statistically significant for the probation outcome PTR filed for a new crime (χ^2 =41.513, p<.001). The Nagelkerke R^2 value indicates that the model explains 17.6% of the variation in PTR filed for a new crime. The vocational/financial category is the only significant predictor. For each one point increase in the vocational/financial category there is a 57.7% (Exp(B)=1.577) increase in the likelihood of having a PTR filed for a new crime.

Unsuccessful probation status. The χ^2 value for the probation outcome unsuccessful probation status is statistically significant (χ^2 =47.010, p<.001). The Nagelkerke R^2 value indicates that the model explains 19.5% of the variation in unsuccessful probation status. Three of the OST/FROST categories are significant predictors. For each one point increase in the vocational/financial category there is an 87.3% (Exp(B)=1.873) increase in the likelihood of having an unsuccessful probation status. For each one point increase in the drug abuse category there is a 45.6% (Exp(B)=1.456) increase in the likelihood of having an unsuccessful probation status. Finally, for each one point increase in the criminal behavior category, there is a 43.3% (Exp(B)=1.433) increase in the likelihood of having an unsuccessful probation status.

Model 5. Model 5 differs for each probation outcome and includes only those variables that remain significant predictors in Model 1 through Model 4.

However, there is a great deal of similarity in the predictors that remain significant across probation outcomes for individuals initially assigned to standard probation caseloads.

PTR filed. Eight variables are included in Model 5 for the probation outcome PTR filed. This model is presented in Table 5.47. The χ^2 value for Model 5 for the probation outcome PTR filed is statistically significant (χ^2 =116.798, p<.001). The Nagelkerke R^2 value indicates that the model explains 40.3% of the variation in PTR filed for individuals initially assigned to standard probation caseloads. Four variables remain significant predictors. Individuals who are married are 34.7% (Exp(B)=.347) less likely to have a PTR filed than individuals who are married. Individuals who have an increase in supervision are over 11 times (Exp(B)=11.274) more likely to have a PTR filed than individuals who have no change in supervision or a decrease in supervision. The other two significant variables are related to the OST/FROST. For each one point increase in the vocational/financial category, there is a 38.5% (Exp(B)=1.385) increase in the likelihood of having a PTR filed. For each one point increase in the drug abuse category, there is a 41.7% (Exp(B)=1.417 increase in the likelihood of having a PTR filed.

PTR filed for a new crime. Seven variables are included in Model 5 for the probation outcome PTR filed for a new crime. The final model explains less of the variation in the outcome than the model for PTR filed. The Nagelkerke R^2 value indicates that the model explains 25.4% of the variation in PTR filed for a new crime. However, the model is statistically significant (χ^2

Table 5.47

Logistic Regression Model 5 for PTR Filed: Individuals Initially Assigned to Standard Probation Caseloads

	PTR Filed		
	B	SE	Exp(B)
Married	-1.057**	.345	.347
Current felony offense	.454	.303	1.575
Multiple charges	.435	.299	1.544
Increase in supervision	2.422***	.381	11.274
# of days on initial caseload assignment	.001	.000	1.001
DVSI – unemployed	.535	.355	1.707
Vocational/financial	.326*	.151	1.385
Drug abuse	.349**	.132	1.417
Constant	-2.264***	.404	
-2 Log Likelihood	328.188		
χ^2	116.798***		
Nagelkerke R^2	.403		

*p<.05. **p<.01. ***p<.001.

=61.689, p<.001). This model is presented in Table 5.48. Four variables remain significant predictors. Individuals on probation for multiple charges are 87.7% (Exp(B)=1.877) more likely to have a PTR filed for a new crime than individuals on probation for a single offense. Individuals who have an increase in supervision are over three times (Exp(B)=3.197) more likely to have a PTR filed for a new crime compared to individuals with no change or a decrease in supervision. For each additional contact between the probation officer and the client, there is a 1.6% (Exp(B)=1.016) increase in the likelihood of having a PTR filed for a new crime. For each one point increase in the vocational/financial category of the

Table 5.48

Logistic Regression Model 5 for PTR Filed for a New Crime: Individuals Initially Assigned to Standard Probation Caseloads

	PTR Filed – New Crime		
	B	SE	Exp(B)
< 17 at age of first arrest	.432	.328	1.541
Multiple charges	.630*	.293	1.877
Increase in supervision	1.162**	.370	3.197
# of days on initial caseload assignment	.001	.000	1.001
Total client contacts	.016**	.006	1.016
DVSI – unemployed	.274	.355	1.315
Vocational/financial	.318*	.144	1.374
Constant	-3.157***	.394	
-2 Log Likelihood	306.120		
χ^2	61.689***		
Nagelkerke R^2	.254		

*p<.05. **p<.01. ***p<.001.

OST/FROST there is a 37.4% (Exp(B)=1.374) increase in the likelihood of having a PTR filed for a new crime.

Unsuccessful probation status. Table 5.49 presents the results of Model 5 for unsuccessful probation status. Eight variables are included in the model. The χ^2 value is statistically significant (χ^2 =86.710, p<.001). The Nagelkerke R^2 value indicates that the model explains 34.0% of the variation in unsuccessful probation status. Only two variables remain significant predictors. Consistent with the other probation outcomes, individuals who experience an increase in supervision are over five times (Exp(B)=5.245) more likely to have an unsuccessful probation status compared to individuals with no change or a decrease in supervision. For each one point increase in the drug abuse category of the OST/FROST there is a

36.4% (Exp(B)=1.364) increase in the likelihood of having an unsuccessful probation status.

Table 5.49

Logistic Regression Model 5 for Unsuccessful Probation Status: Individuals Initially Assigned to Standard Probation Caseloads

	Unsuccessful Probation Status		
	B	SE	Exp(B)
Married	-.650	.372	.522
Current felony offense	.442	.361	1.556
Increase in supervision	1.657***	.322	5.245
DVSI total score	.115	.054	1.122
DVSI – unemployed	.565	.363	1.759
Vocational/financial	.246	.151	1.280
Drug abuse	.310*	.132	1.364
Criminal behavior	.161	.103	1.175
Constant	-3.498	.479	
-2 Log Likelihood	289.824		
χ^2	86.710***		
Nagelkerke R^2	.340		

*p<.05. **p<.01. ***p<.001.

Model 5 summary. Differences exist in the variables that retained significance in Model 5 for individuals initially assigned to specialized domestic violence caseloads and those initially assigned to standard probation caseloads. A summary of the types of variables that retained significance is found in Table 5.50 for individuals initially assigned to specialized domestic violence caseloads and in Table 5.51 for individuals initially assigned to standard probation caseloads. For individuals initially assigned to specialized domestic violence caseloads, variables from the assessments, either the DVSI or the initial OST/FROST are not

significant predictors of either PTR filed for a new crime or unsuccessful probation status. The variables that remain significant for these individuals tend to come from Model 1, which included demographic, criminal history, current offense and victim characteristics and Model 2, which includes variables related to supervision. For individuals initially assigned to standard probation caseloads variables related to supervision and the initial OST/FROST are more likely to retain significance. None of the variables from the DVSI are found to be significant predictors.

Table 5.50

Types of Variables Retaining Significance in Model 5, Individuals Initially Assigned to Specialized Domestic Violence Caseloads

Variable	PTR filed	PTR filed – new crime	Unsuccessful probation status
# of variables in Model 5	7	4	13
# of variables retaining significance	6	1	7
# significant variables from Model 1	2 (33.3%)	1 (100.0%)	3 (42.9%)
# significant variables from Model 2	2 (33.3%)	0	4 (57.1%)
# significant variables from Model 3	1 (16.7%)	0	0
# significant variables from Model 4	1 (16.7%)	0	0

Table 5.51

Types of Variables Retaining Significance in Model 5, Individuals Initially Assigned to Standard Probation Caseloads

Variable	PTR filed	PTR filed – new crime	Unsuccessful probation status
# of variables in Model 5	8	7	8
# of variables retaining significance	4	4	2
# significant variables from Model 1	1 (25.0%)	1 (25.0%)	0
# significant variables from Model 2	1 (25.0%)	2 (50.0%)	1 (50.0%)
# significant variables from Model 3	0	0	0
# significant variables from Model 4	2 (50.0%)	1 (25.0%)	1 (25.0%)

Change in Risk

The existing research on effective correctional intervention provides empirical evidence that it is possible to change offender behavior and achieve reductions in recidivism. Risk assessment provides the foundation for the existing model of evidence-based practice that guides many community corrections agencies and is used to help guide supervision and treatment strategies. Individuals are typically reassessed, using risk assessment instruments that contain both static and dynamic risk factors, providing the opportunity to measure change. However, very few studies have been conducted that incorporate change in risk. Instead, even those variables that are dynamic in nature are studied in a static way because they are only collected at one point in time. It is unclear if a

change in risk scores, or more specifically risk reduction, as measured through reassessment, is predictive of probation outcomes.

The bivariate correlations between changes in risk scores produced some significant correlations with the probation outcome measures. To better assess the strength of a change in risk as a predictor of probation outcomes, logistic regression models are created. Models are created for the second FROST assessment conducted and for the last FROST assessment conducted. Each model includes the total FROST assessment score and a measure of change in risk. Two different variables were created to assess change in risk. One is a continuous variable that reflects the actual amount of change in risk from the initial OST/FROST assessment to the reassessment. The second is a dichotomous variable that identifies if there was a decrease in the assessment score or not. For both the second FROST assessment and the last FROST assessment the two measures of change were highly correlated with each other, with bivariate correlations above .70. For each model, the change variable selected is the one with the strongest bivariate correlation to the probation outcome.

PTR Filed

Table 5.52 presents the results of the logistic regression for the probation outcome PTR filed. For the second FROST assessment, the χ^2 value is statistically significant ($\chi^2 = 55.700$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains 15.7% of the variation in PTR filed. The results are stronger for the last FROST assessment. The χ^2 value is statistically significant ($\chi^2 = 80.141$, $p<.001$). The Nagelkerke R^2 value indicates that the model explains

22.0% of the variation in PTR filed. In each model the FROST assessment score is a significant predictor. For each one point increase in the score on the second FROST conducted, there is a 19.2% (Exp(B)=1.192) increase in the likelihood of having a PTR filed. For each one point increase in the score on the last FROST conducted, there is a 23.9% (Exp(B)=1.239) increase in the likelihood of having a PTR filed. However, the variable representing a change in risk was not significant in either model.

PTR Filed for Technical Violations Only

Table 5.53 presents the results of the logistic regression of change variables on the probation outcome PTR filed for technical violations only. The

Table 5.52

Logistic Regression Change in Risk for PTR Filed

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Total FROST score	.175***	.028	1.192	.214***	.029	1.239
Decrease in score	-.104	.237	.902			
# points change in score				.007	.029	1.007
Constant	-1.620	.341		-2.051	.296	
-2 Log Likelihood	556.033			531.588		
χ^2	55.700***			80.141***		
Nagelkerke R^2	.157			.220		

*p<.05. **p<.01. ***p<.001

χ^2 value for the model including the second FROST assessment is statistically significant (χ^2 = 17.704, p<.001), as is the χ^2 value for the model including the

last FROST assessment (χ^2 = 17.884, p<.001). The Nagelkerke R^2 value for each model is .062, indicating that the model explains 6.2% of the variation in PTR filed for technical violations only. As with the models for PTR filed, the FROST score, whether it is the second FROST assessment or the last FROST assessment, is a significant predictor. For each one point increase in the second FROST assessment, there is a 9.4% (Exp(B)=1.094) increase in the likelihood of having a PTR filed for technical violations. For each one point increase in the last FROST assessment, there is an 11.7% (Exp(B)=1.117) increase in the likelihood of having a PTR filed for technical violations. The variable representing a change in risk was not significant in either model.

Table 5.53

Logistic Regression Change in Risk for PTR Filed for Technical Violations Only

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Total FROST score	.090**	.030	1.094	.110***	.030	1.117
Decrease in score	-.423	.268	.655			
# points change in score				.004	.032	1.004
Constant	-1.912	.388		-2.397	.343	
-2 Log Likelihood	425.307			425.168		
χ^2	17.704***			17.844***		
Nagelkerke R^2	.062			.062		

*p<.05. **p<.01. ***p<.001

PTR Filed for a Violation of DV Conditions

Table 5.54 presents a similar pattern in the results of the logistic regression of change in risk on PTR filed for a violation of DV conditions. The χ^2 value for the model including the second FROST assessment is statistically significant ($\chi^2 = 52.835$, $p<.001$), as is the χ^2 value for the model including the last FROST assessment ($\chi^2 = 67.144$, $p<.001$). The Nagelkerke R^2 value indicates that 15.0% of the variation in PTR filed for a violation of DV conditions is explained by the model containing the second FROST assessment while 19.2% of the variation is explained by the model containing the last FROST assessment. The assessment scores are significant predictors while the change in risk, as measured by a decrease in risk score, is not. For each one point increase in the second FROST score there is an 18.3% (Exp(B)=1.183) increase in the likelihood of a PTR filed for a violation of DV conditions. For each one point increase in the last FROST score there is a 20.1% (Exp(B)=1.201) increase in the likelihood of a PTR filed for a violation of DV conditions.

PTR Filed for Victim Contact

Table 5.55 presents the results of the logistic regression models for PTR filed for victim contact. The χ^2 value for the model including the second FROST assessment is statistically significant ($\chi^2 = 14.088$, $p<.001$), as is the χ^2 value for the model including the last FROST assessment ($\chi^2 = 12.960$, $p<.01$). The Nagelkerke R^2 for the model including the second FROST assessment indicates that the model explains 5.2% of the variation in PTR filed for victim contact.

Table 5.54

Logistic Regression Change in Risk for PTR Filed for Violation of DV Conditions

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Total FROST score	.168***	.028	1.183	.183***`	.028	1.201
Decrease in score	-.161	.239	.851	-.164	.250	.848
Constant	-1.887	.349		-2.044	.369	
-2 Log Likelihood	531.519			516.209		
χ^2	51.835***			67.144***		
Nagelkerke R^2	.150			.192		

*p<.05. **p<.01. ***p<.001

This is slightly higher than the 4.8% explained by the model including the last FROST assessment. Only the last FROST assessment score is a significant predictor. For each one point increase in the score of the last FROST assessment, there is a 9.0% (Exp(B)=1.090) increase in the likelihood of a PTR for victim contact.

Table 5.55

Logistic Regression Change in Risk for PTR Filed for Victim Contact

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Total FROST score	.106	.031	1.111	.086**	.031	1.090
Decrease in score	-.062	.289	.940	-.195	.304	.823
Constant	-2.470	.422		-2.220	.435	
-2 Log Likelihood	393.132			394.261		
χ^2	14.088***			12.960**		
Nagelkerke R^2	.052			.048		

*p<.05. **p<.01. ***p<.001

PTR Filed for a New Crime

The logistic regression models for the probation outcome PTR filed for a new crime are presented in Table 5.56. The χ^2 value for the model including the second FROST assessment is statistically significant ($\chi^2 = 23.224$, $p<.001$), as is the χ^2 value for the model including the last FROST assessment ($\chi^2 = 35.644$, $p<.001$). The Nagelkerke R^2 value indicates that 7.6% of the variation in PTR filed for a new crime is explained by the model containing the second FROST assessment while 11.5% of the variation is explained by the model containing the last FROST assessment. The FROST assessment score was a significant predictor in each model. For each one point increase in the second FROST assessment, there is a 14.2% (Exp(B)=1.142) increase in the likelihood of a PTR for a new crime. For each one point increase in the last FROST assessment, there is a 16.1% (Exp(B)=1.161) in the likelihood of a PTR for a new crime. The change variables are not significant predictors.

PTR Filed for a New DV Offense

A consistent pattern is found in the logistic regression models for the probation outcome PTR filed for a new DV offense. The results are presented in Table 5.57. Only the χ^2 value for the model including the last FROST assessment is statistically significant ($\chi^2 = 11.683$, $p<.01$). Very little variation in the outcome PTR filed for a new DV offense is explained by the model ($R^2 =.051$). The FROST assessment score is a significant predictor in each model, while the change variables are not. For each one point increase in the second FROST score,

Table 5.56

Logistic Regression Change in Risk for PTR Filed for New Crime

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Total FROST score	.133***	.029	1.142	.150***	.029	1.161
Decrease in score				.079	.275	1.083
# points change in score	.032	.032	1.033			
Constant	-2.368	.319		-2.537	.410	
-2 Log Likelihood	470.541			458.121		
χ^2	23.224***			35.644***		
Nagelkerke R^2	.076			.115		

*p<.05. **p<.01. ***p<.001

there is a 7.9% (Exp(B)=1.079) increase in the likelihood of a PTR filed for a new DV offense. For each one point increase in the last FROST assessment score there is an 11.3% (Exp(B)=1.113) increase in the likelihood of having a PTR filed for a new DV offense.

PTR Filed for Unsuccessful Probation Status

The results of the logistic regression models for the probation outcome unsuccessful probation status are presented in Table 5.58. The χ^2 value for the model including the second FROST assessment is statistically significant (χ^2 = 37.577, p<.001), as is the χ^2 value for the model including the last FROST assessment (χ^2 = 59.875, p<.001). The Nagelkerke R^2 value indicates that 12.0% of the variation in unsuccessful probation status is explained by the model containing the second FROST assessment while 18.6% of the variation is

Table 5.57

Logistic Regression Change in Risk for PTR Filed for New DV Offense

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Total FROST score	.076*	.036		.107**	.038	1.113
Decrease in score	.448	.367				
# points change in score				-.002	.039	.998
Constant	-3.043			-3.043	.436	
-2 Log Likelihood	308.505			301.319		
χ^2	4.497			11.683**		
Nagelkerke R^2	.020			.051		

*p<.05. **p<.01. ***p<.001

explained by the model containing the last FROST assessment. As with the other models, the change variables are not significant predictors. The FROST assessment score in each model is a significant predictor. For each one point increase in the second FROST score, there is a 17.4% (Exp(B)=1.174) increase in the likelihood of having an unsuccessful probation status. For each one point increase in the last FROST assessment, there is a 20.1% (Exp(B)=1.201) increase in the likelihood of having an unsuccessful probation status.

Significance of Reassessment Scores as Predictors of Probation Outcomes

Although the change in risk scores are not found to be significant predictors of any of the probation outcomes, the total FROST scores from reassessments are found to be predictive of probation outcomes. As a final step to assess the significance of the reassessment scores as predictors of probation

Table 5.58

Logistic Regression Change in Risk for Unsuccessful Probation Status

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Total FROST score	.161**	.029	1.174	.190***	.031	1.201
# points change in score	.005	.032	1.005	-.006	.031	.994
Constant	-2.532	.326		-2.827	.349	
-2 Log Likelihood	462.945			440.626		
χ^2	37.557***			59.875***		
Nagelkerke R^2	.120			.186		

*p<.05. **p<.01. ***p<.001

outcomes, the reassessment scores were added to the variables from Model 5 that retained significance for each probation outcome to determine if the total score on the reassessment retained significance as a predictor. For each probation outcome except for PTR filed for technical violations only, the total score on the reassessment is a significant predictor. The results of these logistic regression models are presented in Tables 5.59 through 5.64. For each probation outcome, a description is provided of the overall significance of the model and the significance of the reassessment score as a predictor.

PTR Filed. The logistic regression models for reassessment scores and the probation outcome PTR filed are presented in Table 5.59. For the probation outcome PTR filed, the χ^2 value for the model including the second FROST assessment is statistically significant ($\chi^2 = 163.885$, $p<.001$), as is the χ^2 value for the model including the last FROST assessment ($\chi^2 = 175.255$, $p<.001$). The

Table 5.59

Logistic Regression Significance of Reassessment Scores, PTR Filed

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Married	-.601*	.284	.548	-.586*	.290	.556
3+ prior juvenile adjudications or adult convictions	-.120	.274	.887	-.250	.278	.729
Juvenile victim	-.498	.313	.608	-.454	.313	.635
Initial assignment to DV caseload	1.122***	.272	3.072	1.218***	.280	3.381
Decrease in supervision	-1.570***	.444	.208	-1.673***	.455	.188
Increase in supervision	2.174***	.350	8.790	2.126***	.355	8.379
Unemployed	.648**	.253	1.911	.481	.259	1.618
Drug abuse	.215*	.110	1.240	.195	.110	1.215
2nd FROST	.128***	.033	1.136			
Last FROST				.163***	.033	1.177
Constant	-2.144***	.321		-2.359***	.324	
-2 Log Likelihood	440.594			429.224		
χ^2	163.885			175.255		
Nagelkerke R^2	.416			.440		

*p<.05. **p<.01. ***p<.001

Nagelkerke R^2 value indicates that 41.6% of the variation in PTR filed is explained by the model containing the second FROST assessment while 44.0% of the variation is explained by the model containing the last FROST assessment. For each one point increase in the 2nd FROST score, there is a 13.6% (Exp(B)=1.136) increase in the likelihood of having a PTR filed. For each one point increase in the last FROST score, there is a 17.7% (Exp(B)=1.177) increase in the likelihood of having a PTR filed.

PTR filed for violation of DV conditions. Table 5.60 presents the results for PTR filed for a violation of DV conditions. The χ^2 value for the model including the second FROST assessment is statistically significant (χ^2 =137.380 p<.001), as is the χ^2 value for the model including the last FROST assessment (χ^2 = 144.509, p<.001). The Nagelkerke R^2 value indicates that 36.3% of the variation in PTR filed for a violation of DV conditions is explained by the model containing the second FROST assessment while 37.9% of the variation is explained by the model containing the last FROST assessment. For each one point increase in the second FROST score there is a 14.0% (Exp(B)=1.140) increase in the likelihood of having a PTR filed for a violation of DV conditions. For each one point increase in the last FROST score there is a 15.9% (Exp(B)=1.159) increase in the likelihood of having a PTR filed for a violation of DV conditions.

PTR filed for victim contact. The χ^2 value for the model including the second FROST assessment is statistically significant (χ^2 =48.892, p<.001), as is the χ^2 value for the model including the last FROST assessment (χ^2 = 48.181, p<.001). The Nagelkerke R^2 value indicates that 17.5% of the variation in PTR filed for victim contact is explained by the model containing the second FROST assessment while 17.2% of the variation is explained by the model containing the last FROST assessment. The results are presented in Table 5.61. For each one point increase in the second assessment, there is an 8.6% (Exp(B)=1.086) increase in the likelihood of having a PTR filed for victim contact. For each one point

Table 5.60

Logistic Regression Significance of Reassessment Scores, PTR Filed for Violation of DV Conditions

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Married	-.605*	.289	.546	-.587	.292	.556
Initial assignment to DV caseload	1.071***	.270	2.918	1.142	.276	3.133
Decrease in supervision	-1.585***	.489	.205	-1.662	.495	.190
Increase in supervision	1.495***	.304	4.461	1.449	.310	4.247
Prior arrests assault, menacing, harassing	.033	.261	1.034	-.029	.262	.972
Unemployed	.595*	.247	1.812	.441	.253	1.554
Separated from victim in past six months	.666**	.248	1.946	.679	.251	1.973
Drug abuse	.127	.105	1.135	.122	.105	1.129
2nd FROST	.131***	.031	1.140			
Last FROST				.148	.030	1.159
Constant	-2.925	.378		-3.022	.375	
-2 Log Likelihood	445.973			438.844		
χ^2	137.380***			144.509***		
Nagelkerke R^2	.363			.379		

*p<.05. **p<.01. ***p<.001

increase in the last assessment there is a 7.7% (Exp(B)=1.077) increase in the likelihood of having a PTR filed for victim contact.

PTR filed for a new crime. Table 5.62 presents the results of the models for the probation outcome PTR filed for a new crime. Consistent with the results from other probation outcomes, the χ^2 value for the model including the second FROST assessment is statistically significant (χ^2 =70.676, p<.001), as is the χ^2 value for the model including the last FROST assessment (χ^2 = 76.950, p<.001).

Table 5.61

Logistic Regression Significance of Reassessment Scores, PTR Filed for Victim Contact

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Juvenile victim	-.824	.433	.438	-.780	.431	.459
Decrease in supervision	-1.477*	.747	.228	-1.535*	.748	.215
Increase in supervision	.539	.310	1.714	.515	.311	1.673
# victim contacts	.086***	.023	1.089	.086	.023	1.090
Prior drug or alcohol treatment	.429	.298	1.536	.531	.293	1.701
Unemployed	.230	.284	1.259	.184	.287	1.203
2nd FROST	.082*	.032	1.086			
Last FROST				.074*	.031	1.077
Constant	-2.723	.356		-2.670		
-2 Log Likelihood	346.449			357.160		
χ^2	48.892***			48.181***		
Nagelkerke R^2	.175			.172		

*p<.05. **p<.01. ***p<.001

The Nagelkerke R^2 value indicates that 21.9% of the variation in PTR filed for a new crime is explained by the model containing the second FROST assessment while 23.7% of the variation is explained by the model containing the last FROST assessment. For each one point increase in the second FROST score there is a 7.8% (Exp(B)=1.078) increase in the likelihood of having a PTR filed for a new crime. For each one point increase in the last FROST score there is a 10.6% (Exp(B)=1.106) increase in the likelihood of having a PTR filed for a new crime.

PTR filed for a new DV offense. Only the last FROST assessment score retained significance as a predictor of PTR filed for a new DV offense. The

Table 5.62

Logistic Regression Significance of Reassessment Scores, PTR Filed for New Crime

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Age at sentence	-.035**	.013	.965	-.032*	.013	.969
Decrease in supervision	-1.172	.620	.310	-1.198	.623	.302
Increase in supervision	1.072***	.276	2.920	.963***	.280	2.619
Separated from victim in past six months	.456	.254	1.578	.487	.257	1.627
On community supervision at time of offense	.515	.331	1.674	.385	.341	1.470
Vocational/financial	.258*	.103	1.294	.247*	.103	1.280
2nd FROST	.075**	.029	1.078			
Last FROST				.101***	.028	1.106
Constant	-1.490	.543		-1.800	.560	
-2 Log Likelihood	423.089			416.815		
χ^2	70.676***			76.950***		
Nagelkerke R^2	.219			.237		

*p<.05. **p<.01. ***p<.001

results are presented in Table 5.63. The χ^2 value is statistically significant (χ^2 =40.360, p<.001). The Nagelkerke R^2 value indicates that 17.2% of the variation in PTR filed for a new DV offense is explained by the model containing the last FROST assessment. For each one point increase in the last FROST score there is an 11.5% (Exp(B)=1.115) increase in the likelihood of having a PTR filed for a new DV offense.

Unsuccessful probation status. Table 5.64 presents the results of the model for the probation outcome unsuccessful probation status. The χ^2 value for

Table 5.63

Logistic Regression Significance of Reassessment Scores, PTR Filed for New DV Offense

	Last FROST assessment		
	B	SE	Exp(B)
Multiple charges	.909*	.359	2.481
DV offenses only	2.251***	.688	9.502
Increase in supervision	1.115***	.339	3.050
# of victim contacts	.056*	.027	1.058
Last FROST	.109**	.036	1.115
Constant	-5.892	.872	
-2 Log Likelihood	272.642		
χ^2	40.360		
Nagelkerke R^2	.172		

*p<.05. **p<.01. ***p<.001

the model including the second FROST assessment is statistically significant (χ^2 =116.867, p<.001), as is the χ^2 value for the model including the last FROST assessment (χ^2 = 125.677, p<.001). The Nagelkerke R^2 value indicates that 34.6% of the variation in unsuccessful probation status is explained by the model containing the second FROST assessment while 36.8% of the variation is explained by the model containing the last FROST assessment. For each one point increase in the second FROST score there is a 10.9% (Exp(B)=1.109) increase in the likelihood of having an unsuccessful probation status. For each one point increase in the last FROST score, there is a 14.8% (Exp(B)=1.148) increase in the likelihood of having an unsuccessful probation status.

Table 5.64

Logistic Regression Significance of Reassessment Scores, Unsuccessful Probation Status

	Second FROST assessment			Last FROST assessment		
	B	SE	Exp(B)	B	SE	Exp(B)
Age at sentence	-.039**	.014	.961	-.036*	.014	.965
3+ juvenile adjudications/ adult convictions	.068	.299	1.071	-.013	.300	.987
Juvenile victim	-.667	.363	.515	-.576	.365	.562
Initial assignment to DV caseload	.946**	.305	2.575	.969**	.310	2.635
Decrease in supervision	-2.654**	1.034	.070	-2.803**	1.048	.061
Increase in supervision	1.422***	.304	4.147	1.301***	.310	3.673
Prior DV treatment	-.982*	.443	.375	-1.067*	.458	.344
Unemployed	.845**	.269	2.329	.758**	.274	2.135
Family and social relationships	.059	.099	1.061	.051	.099	1.052
Drug abuse	.027	.114	1.027	.004	.115	1.004
2nd FROST	.103**	.035	1.109			
Last FROST				.138***	.033	1.148
Constant	-1.692***	.567		-2.020***	.588	
-2 Log Likelihood	376.347			367.537		
χ^2	116.867***			125.677***		
Nagelkerke R^2	.346		.	.368		

*p<.05. **p<.01. ***p<.001

Conclusion

The purpose of the analyses conducted in this chapter is to identify the strongest predictors of probation outcomes for domestic violence offenders. It was hypothesized that dynamic predictors, specifically employment, substance abuse, family and social relationships and attitude, would be among the strongest

predictors. It was also hypothesized that a change in risk score, in particular a reduction in risk, would be a significant predictor.

The bivariate correlations of the study variables with the probation outcomes find that variables across all categories are significantly related to at least some of the probation outcomes. Some types of variables are more consistently related to the probation outcome measures. There are fewer significant correlations found among the demographic, current offense and victim characteristic variables. The strength of these correlations also tended to be fairly low. The strongest correlation with any probation outcome among the demographic variables is married, at .171. The strongest correlation among current offense variables is .154 for a current felony offense. Among the victim characteristics, the strongest correlation with any probation outcome was having a juvenile victim, -.122. Variables in the criminal history, supervision, DVSI, OST/FROST and reassessment categories had more consistent and stronger correlations with probation outcomes. Among the criminal history variables three or more prior juvenile adjudications or adult convictions has the strongest correlation with any outcome at .237. The strongest correlation among supervision variables is .248 for an initial assignment to a specialized domestic violence caseload. From the DVSI assessment, being unemployed had the strongest correlation with any probation outcome at .318. The strongest correlation for the initial OST/FROST score is .310 and for the last FROST score, .410.

The significance of the variables as predictors of probation outcomes was assessed through logistic regression models. Some variables across each of the different categories of variables retained significant as predictors. Overall, 19 variables remained significant predictors across the final models for each probation outcome. Supervision variables, including an initial assignment to a domestic violence caseload, and either an increase in supervision or a decrease in supervision were most the most consistent predictors of probation outcomes. They were also the strongest predictors. For example, for six of the seven probation outcomes assessed in the study, an increase in supervision makes it over 2 times as likely that the individual will have a negative probation outcome compared to those who have no change or a decrease in supervision. Dynamic variables are also among the most consistent predictors. The dynamic predictors included employment and substance abuse. Family and social relationships is only associated with one probation outcome and attitudes is not found to be a significant predictor of any outcome. Overall, the hypothesis that dynamic variables are among the strongest predictors of probation outcomes is only partially supported.

Finally, a change in risk scores is not a significant predictor of any probation outcome. However, reassessment scores, measured by the total FROST score from the second FROST conducted and the last FROST conducted are found to be significant predictors of probation outcomes, lending some support to the notion that subsequent assessments using instruments containing both static and dynamic variables continue to have the ability to predict probation outcomes.

Chapter 6

DISCUSSION

This study provides a look at risk assessment for domestic violence offenders and the ability to predict probation outcomes. The study includes a relatively large sample of probationers, 573, sentenced to supervised probation on either a specialized domestic violence caseload or a standard probation caseload. It expands on the existing literature in this area by providing a study that focuses on the use of risk assessment instruments with domestic violence offenders in a real world context. The definitions of who is a domestic violence offender and what offenses are considered domestic violence offenses reflect the definitions used by the Maricopa County Adult Probation Department. In addition, the data analyzed in the study reflect the information probation officers record during supervision and represent the information they have available to make decisions about supervision and case management. Because of this, the results of the study are a reflection of the actual environment where risk assessment instruments are used with domestic violence offenders. The study also expands the variables that have typically been incorporated as potential predictors. Most notably, attempts were made to include variables that reflect supervision and change in risk.

The hypotheses of the study fall into two broad categories. The first is whether the existing risk assessment instruments used by the Maricopa County Adult Probation Department are predictive of probation outcomes. The risk assessment instruments used include a risk assessment developed specifically for domestic violence offenders, the DVSI, and a general risk and needs assessment

tool, the OST/FROST. The second is identifying the strongest predictors of probation outcomes for domestic violence offenders, hypothesizing dynamic risk factors, and change in risk, will be among the strongest predictors.

The results provide mixed support for the hypotheses of the study. The DVSI and OST/FROST each contain unique risk factors in the assessment instrument. Both instruments are found to be predictive of probation outcomes which is demonstrated through significant correlations between the assessment and outcome measures and the ability to differentiate failure rates by risk level. Each instrument also predicts probation outcomes at levels better than chance, as demonstrated by the AUC.

Mixed results are found when looking at the most significant predictors of probation outcomes. While many variables appeared to be significantly related to probation outcomes when looking at the bivariate correlations, their significance as predictors of probation outcomes diminished in the logistic regression models. Variables associated with supervision, such as the initial caseload assignment to a specialized domestic violence or standard probation caseload, and changes in supervision, either an increase or decrease were the strongest and most consistent predictors across probation outcomes. The dynamic predictors that are most predictive of probation outcomes are employment and substance abuse. Family and social relationships is only found to be a significant predictor of an unsuccessful probation status and attitudes are not found to be a significant predictor of any of the probation outcomes. Change at risk, measured either through the number of points change in the total risk score, or dichotomously as a

decrease in risk score, is not a significant predictor of any of the probation outcomes. This chapter will discuss the implications of the findings for the field along with unanticipated results, limitations of the study and directions for future research.

Implications for the Field

The use of risk assessment instruments by community corrections agencies has increased over the past 20 years and assessing the risk and needs of offenders has been identified as the foundation of evidence-based practices (Clawson et al., 2005). The expectation is that the results of risk assessments help guide officers as they make decisions about supervision and treatment. The Maricopa County Adult Probation Department is one department that has made a commitment to using risk and needs assessments (Maricopa County Adult Probation Department, 2007; Maricopa County Adult Probation Department, 2008; Maricopa County Adult Probation Department, 2009; Maricopa County Adult Probation Department, 2010) . This study demonstrates that the department is using the results of the assessment to guide decisions. Most notably, the DVSI was implemented to help guide decisions about who should receive supervision on specialized domestic violence caseloads. The results indicate that the DVSI cutoff scores are used to make this determination. Of the 259 individuals assessed as high risk on the DVSI, 219 (84.6%) were assigned to the specialized domestic violence caseloads.

The results of this study lend support to the continued use of both the DVSI and the OST/FROST. Both assessments are found to be predictive of

probation outcomes at levels better than chance, as measured by the Area Under the Curve (AUC). Previous validation studies of the OST/FROST have not used the ROC curve to assess the validity of the instrument. However, the AUC found for the DVSI is consistent with the results of other studies. In their study of the DVSI, Williams and Houghton (2004) found an AUC of .61 for domestic violence offending and .65 for any offending. This study found AUC values ranging from .575 for PTR filed for a new crime to .666 for unsuccessful probation status. The AUC values were higher for the OST/FROST ranging from .615 for PTR filed for technical violations only to .682 for PTR filed.

The study also suggests that there is value to the continued use of both the DVSI and the OST/FROST. Each assessment instrument contains unique risk factors and assesses risk differently. Both instruments together were found to be more predictive than either instrument alone. The challenge for the field is how to translate this into practice. The results indicate that being assessed as high risk on one assessment does not mean that the individual will be assessed as high risk on the other. Table 6.1 provides a comparison of the assessed risk levels on both instruments. Of the 573 individuals in the sample, 197 are assessed as low risk on both the DVSI and the OST/FROST. There are 143 individuals assessed as high risk on both assessment instruments. This indicates that 340 (59%) are assessed at the same risk level on both instruments while 233 (41%) are not. Potentially conflicting information across assessment instruments can be problematic for those who are expected to use the information to guide decisions. Hanson and Morton-Bourgon (2009) acknowledged the issue of how to interpret divergent

Table 6.1

Crosstabulations DVSI Risk Categories and OST/FROST Risk Categories (N=573)

	DVSI Risk Level	
OST/FROST Risk Level	Low Risk	High Risk
Low Risk	197	116
High Risk	117	143

findings from different tools as an unresolved question in their meta-analysis of risk assessment for sex offenders. They state, "As yet no empirically justified method has been established for resolving such divergent results" (Hanson & Morton-Bourgon, 2009, 10). However, a risk assessment instrument is only meaningful if the information is actually used. When there are multiple assessments, that may provide differing results, some guidelines need to be provided to the staff charged with using the assessments. Currently, the DVSI is used to make decisions about caseload assignments, while the OST/FROST is used to guide decisions about supervision level and case plan goals. As the DVSI contains static items, and as reassessment scores become more predictive of probation outcomes than the initial assessment score, the current practice of using both assessments may be sufficient.

The results of the study, in terms of which variables are significant predictors of probation outcomes, also provide some guidance to the field. In terms of dynamic predictors, employment and substance abuse are the dynamic factors that are most consistently found to be predictive of probation outcomes. This provides officers some guidance on factors to pay attention to over the

course of supervision. These are also factors that officers are likely to feel more comfortable addressing as resources and strategies for addressing employment and substance abuse tend to be more available than other potential dynamic risk factors such as attitude.

The significance of supervision variables is also an important finding for the field as it identifies that supervision matters and what occurs during supervision can contribute to outcomes, both positive and negative. The probation outcomes for individuals initially assigned to the specialized domestic violence caseloads are significantly worse than those initially assigned to standard probation. For example, 64% of individuals initially assigned to specialized domestic violence caseloads had a PTR filed compared to 40% of those initially assigned to standard probation. Of those initially assigned to the specialized domestic violence caseloads 46% had an unsuccessful probation status compared to 26% of those initially assigned to standard probation. While the results may not be surprising because those supervised on the specialized domestic violence caseloads are higher risk offenders, it is also anticipated that the specialized supervision would provide them with the opportunities for better outcomes. At the same time, significant differences were not found in terms of the probation outcomes associated with new criminal behavior. Of those initially assigned to specialized domestic violence caseloads 28% had a PTR filed for a new crime compared to 25% of those initially assigned to standard probation caseloads. Of those initially assigned to specialized domestic violence caseloads 13% had a

PTR filed for a new domestic violence offense, compared to 10% of those initially assigned to standard probation caseloads.

These findings are consistent with other studies of probation that found that supervision matters. In the 1980s intensive supervision programs (ISP) were developed as intermediate sanctions to represent a sentencing option between prison and standard probation (Petersilia, 1998; Petersilia & Turner, 1990). Evaluations of these programs found that ISP did provide more intensive contact and surveillance and those assigned to ISP had more technical violations than those assigned to standard supervision. However, it was also found that there were no significant differences in arrests between the two groups (Petersilia, 1998; Petersilia & Turner, 1990). It was suggested that the supervision activities, in terms of closer monitoring and surveillance, provided more opportunities to detect technical violations. It is possible that something similar is occurring for those assigned to the specialized domestic violence caseloads. One element of the specialized domestic violence supervision is the use of surveillance officers. This likely contributes to the higher number of contacts for those supervised on specialized domestic violence caseloads. Increased contact provides more opportunities to detect technical violations.

At the same time, there is a growing body of literature that demonstrates that what occurs through probation supervision can have a positive impact on outcomes. Subsequent studies of intensive supervision programs have found that the content of the program can influence the results. It has been suggested that ISPs based on control, surveillance and the threat of punishment do not address

the factors that are associated with recidivism. Instead, ISPs that are effective are those that also include a treatment component (Lowenkamp, Flores, Holsinger, Makarios, & Latessa, 2010; Petersilia, 1998).

The role of specialized caseloads for certain populations has also been addressed. Seriously mentally ill (SMI) offenders have been identified as one specialized population that has had a tendency to fail on probation at higher rates than other offenders (Skeem & Eno Louden, 2006). One response to this has been to create specialized caseloads for SMI offenders. Characteristics of specialized SMI caseloads include reduced caseload size, ongoing officer training on mental health issues, providing linkages to treatment and services, and the use of problem-solving strategies (Prins & Osher, 2009; Skeem & Eno Louden, 2006). These characteristics allow officers to provide better access to services and to respond more effectively to minor violation behavior.

The relationship that develops between the probation officer and the probationer also appears to be important and have the potential to influence outcomes. Relationship factors have been identified as an element of core correctional practice and relationships characterized by warmth, caring, empathy, respect and flexibility are believed to be more effective (Dowden & Andrews, 2004). Skeem and her colleagues (Skeem, Eno Louden, Polaschek, & Camp, 2007) have also looked at the relationship between the probation officer and the probationer. They found that relationships perceived as uncaring, unfair or disrespectful contributed to poor outcomes. They constructed an instrument called the Dual-Role Relationship Inventory Revised (DRI-R) that contains three

factors associated with probationer/probation officer relationships. The factors include trust, caring-fairness and toughness. These factors have been found to be associated with probation outcomes. The negative aspects of the relationship quality, those associated with toughness, were associated with more probation violations. The positive aspects of relationship quality, associated with trust, and caring-fairness were associated with fewer probation violations (Skeem et al., 2007).

Finally, James Bonta and his colleagues (Bonta et al., 2010; Bourgon, Bonta, Rugge, Scott & Yessine, 2009) have also focused on what occurs during probation supervision with a focus on putting the principles of evidence-based practice, most notably the principles of risk, need, and responsivity, into practice. This has been done in the context of interactions between the probation officer and the probationer. Officers who volunteers to participate in the study were randomly assigned to the experimental group or the control group. Those in the control group were provided a half-day workshop on the goal of the project. Those in the experimental group were provided extensive training on evidence-based practices including the General Personality and Cognitive Social Learning (GPCSL) Theory, the principles of risk, need, and responsivity, and elements of core correctional practices. They were also provided with a general structure for each probation contact and ongoing feedback on their integration and use of skills. Overall, the study found that officers were able to integrate the skills into their interactions with their probationers. In addition, there was a significant difference in the recidivism rates of probationers assigned to the experimental

group compared to those in the control group. The two-year reconviction rate for probationers supervised by officers in the experimental group was 25.3%. The two-year reconviction rate for probationers supervised by officers in the control group was 40.5%. Overall, there is a growing body of research highlighting the importance of supervision.

When looking at the variables that remain significant predictors of probation outcomes, there are some surprises, or unanticipated findings. Although the DVSI and the initial OST/FROST assessment are found to be predictive of probation outcomes, the total score for either assessment is not a significant predictor. In addition, very few of the individual items from the DVSI or categories from the OST/FROST remained significant predictors. The most consistent predictors from both assessments are related to the same risk factors, employment and substance abuse. Other dynamic factors that have consistently been recognized as significant predictors of recidivism are not found to be predictive in this study. Most notably antisocial companions, which is assessed through the family and social relationships category of the OST/FROST and antisocial attitudes, which is assessed through the attitude category of the OST/FROST are not found to be significant. This is surprising as these risk factors have been identified as part of the "Big Four" (Andrews & Bonta, 1998), and meta-analyses have found them to be among the strongest predictors of recidivism (Gendreau et al., 1996).

There are some potential explanations for the absence of significance found in these variables. As the study only included the scores from each

category of the OST/FROST it is possible that the ability to identify some significant risk factors was lost by not including each individual item from the assessment. It is also possible that officers are not accurately assessing the attitude category of the OST/FROST. Although criminal attitudes have been recognized as a significant predictor of criminal behavior, it is also recognized that these attitudes are hard to define. What is meant by criminal attitudes is more than an offender having a "bad" attitude. Instead, criminal attitudes are those attitudes, values and beliefs that are supportive of crime, or that allow one to continue to engage in criminal behavior. Bonta et al. (2010) also suggests that for every criminogenic need that a person has, there is an underlying attitude that supports that need. For example, if a person has a substance abuse problem, they have attitudes related to substance abuse that allow them to continue to use.

Previous analysis of data from the OST/FROST through the statewide validation study (Lowenkamp et al., 2008) has identified challenges assessing the attitude category of the OST/FROST. The statewide validation study included a component to assess the reliability, or scoring consistency, of individuals conducting OST/FROST assessments across the state. Officers were provided with a sample case containing criminal and social history information and asking them to score the assessment based on the information provided. The overall level of agreement on the scoring of the attitude items was 81 percent. Of the seven items in the attitude category, the inter-rater agreement was 89 percent or higher for four items. The inter-rater agreement on the other three items ranged from 62 percent to 72 percent. Special attention was given to scoring the attitude

category of the OST/FROST by also providing six additional mini-scenarios and asking officers to score the attitude section only for these scenarios. Across the attitude scenarios, the overall agreement on scoring was 83 percent. These results suggest that there is variation in the scoring of the attitude category that could be improved upon, and that could impact whether attitudes are found to be significant predictors of probation outcomes.

Findings related to the change in risk variables are also somewhat surprising. While variables demonstrating a change in risk are significantly related to probation outcomes, the variables do not retain significance as predictors of probation outcomes in the logistic regression models. The variables demonstrating change in risk also are more strongly related to those probation outcomes associated with technical violations than with new criminal behavior. At the same time, the overall FROST score from subsequent assessments, including the second assessment conducted, and the last assessment conducted, had stronger correlations with outcomes than the initial OST/FROST assessment. In addition, the total score from subsequent assessments was identified as a significant predictor when added to the logistic regression models for a number of outcomes. Overall, the results suggest that ongoing reassessments continue to be predictive.

Limitations of the Study

The suggestion that the attitude category of the OST/FROST may not be assessed accurately all of the time raises questions about the quality of the assessments conducted by officers. In many studies of risk assessment

instruments or of predictors of criminal behavior, researchers trained on the data collection protocol, or specifically on the assessment tool, collect the data from case file reviews. In many instances the level of agreement between those collecting the data is also assessed, providing confidence that the assessment is scored correctly. While this data collection strategy may increase confidence in the accuracy of the assessment conducted, it does not mirror the real world situations in which risk assessments are conducted and the information used to inform decisions about supervision and treatment. Studies that mirror these conditions are necessary to understand if the assessments conducted by individuals responsible for using the information are predictive. However, it does highlight the importance of ongoing training and quality assurance to ensure the continued and improved accuracy of assessments conducted.

The study is also limited by the variables that are included, or excluded. As one purpose of the study was to investigate the use of risk assessment instruments in a real world setting, the decision was also made to collect only information that was readily available to officers through the automated case management system, or through other electronic resources. Certain variables currently are not entered into the automated case management system. Most notably, information about treatment participation is not available. While data fields for treatment variables exist within the database, information is not consistently entered. Having these variables would help expand the pool of potential predictors of probation outcomes and help understand more about what is taking place within the context of supervision.

Questions may also be raised about the variables selected as measures of probation outcomes. Six of the seven probation outcome measures are related to the filing of petitions to revoke and the reasons for those petitions. While probation departments have policies that guide probation officer responses to violation behavior, probation officers have discretion in the decision of whether or not to file a petition to revoke. Officers also have discretion with regard to what behaviors are alleged within the petition to revoke. For example, if a probationer is arrested for a new criminal offense, one officer may file a petition that only alleges the new criminal behavior. Another officer may include the new criminal behavior but also identify additional technical violations of the conditions that have occurred while on supervision such as missed appointments. This discretion may result in different officers reacting to similar situations in different ways and it could be argued that the decision to file a petition to revoke is more a reflection of officer behavior than probationer behavior.

It is true that the decision to file a petition to revoke is in part a reflection of officer behavior. Previous studies have acknowledged this decision on the part of probation officers (Clear, Harris, & Baird, 1992; Jones & Kerbs, 2007; Stalans, Juergens, Seng, & Lavery, 2004). At the same time, the violations alleged within the petition are a reflection of probationer behavior. In addition, as with other outcome measures associated with criminal behavior, the discretion afforded to officers suggests that the extent of violation behavior that occurs, is likely to be underestimated by using a formal acknowledgement of the violation behavior.

Directions for Future Research

While the ability of the DVSI and the OST/FROST to predict probation outcomes is supported through this study, the results also indicate that there is room for improvement. AUC values for the DVSI and the OST/FROST tended to fall in the range of .60 to .69. While this is better than chance prediction, it is considered only a marginal improvement over chance. Using a grading scale, some might consider this to be the equivalent of a D. In addition, there is variation in the ability of the assessments to predict various probation outcomes and also in the ability of the assessment to predict outcomes for certain sub-groups. Most notably the instruments were less predictive of outcomes related to new criminal behavior. Also, neither the DVSI not the OST/FROST predicted outcomes consistently well for female domestic violence offenders. The DVSI also performed poorly for offenders with non-intimate partner victims.

The logistic regression models also show that there is room for improvement in the prediction of probation outcomes for domestic violence offenders. The strongest models are for the probation outcomes of PTR filed and unsuccessful probation status. However, even these models only explained 42.7% and 41.1% respectively, in these outcomes.

These findings suggest that there are key predictors of probation outcomes for domestic violence offenders that have not been identified yet, or that have not been sufficiently studied yet. Based upon the results of this study, additional variables should be identified to look at aspects of probation supervision including factors related to treatment and the probation officer. More specific

variables also need to be identified to better assess the change that occurs among dynamic risk factors.

The study findings also highlight the heterogeneity of offenders that commit acts of domestic violence. Many studies of risk assessment for domestic violence offenders have focused specifically on intimate partner violence, and most often with male offenders and female victims. This study provided an opportunity to look at domestic violence offenders, very broadly defined. This was done because it reflects the definitions of domestic violence offenses and offenders that are used by the Maricopa County Adult Probation Department. As a result, the sample included acts of domestic violence committed by males and females with multiple types of victims, across many different relationships. It is possible that different risk factors are predictive of probation outcomes for sub-groups of individuals that commit acts defined as domestic violence.

The risk assessment literature also highlights that the variables studied as predictors, or included within assessment instruments, are dependent upon the theory of criminal behavior that is adopted or embraced. Most of the current risk assessment instruments reflect a focus on variables reflective of the psychology of criminal conduct, or why individuals commit crimes. However, there is also empirical support for macro-level theories of crime. Pratt and Cullen (2005) conducted a meta-analysis to assess the effectiveness of macro-level predictors of crime. They discovered that factors associated with "concentrated disadvantage" such as racial heterogeneity, poverty, and family disruption, are among the strongest and most stable predictors of crime rates. These are also factors that

may be considered by probation departments as they make decisions about resource allocation. What is suggested by this is that a focus solely on individual factors may not be sufficient to be able to predict criminal behavior and consideration should be given to integrating both individual and contextual factors.

It has also been recognized that there has been a lot of separation in research on family violence issues (Ehrenaft, 2008). Intimate partner violence, child abuse, and general violence tend to be looked at separately. However, the definitions of domestic violence used by the Maricopa County Adult Probation Department highlight that offenders are not compartmentalized that way when making decisions about supervision and treatment. As a result, there should be more efforts to cut across disciplines in identifying potential risk factors and predictors of domestic violence.

In thinking about directions for future research, it is meaningful to look at the model of evidence-based practice developed by the National Institute of Corrections to guide corrections agencies toward effective interventions. One of the essential elements of the model is collaboration. The purpose of this element is to highlight that corrections agencies cannot be effective in achieving sustained reductions in recidivism if they work alone. Similarly, continued improvements in the ability to predict and assess risk for domestic violence offenders will not occur if collaboration with other fields of study does not occur.

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APPENDIX A

IRB APPROVAL

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	John Hepburn FSW
From:	Mark Roosa, Chair SS Soc Beh IRB
Date:	02/11/2011
Committee Action:	**Expedited Approval**
Approval Date:	02/11/2011
Review Type:	Expedited Fb F7
IRB Protocol #:	1102005974
Study Title:	Risk Assessment for Domestic Violence Offenders
Expiration Date:	02/10/2012

The above referenced protocol was approved following expedited review by the Institutional Review Board.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date. You may not continue any research activity beyond the expiration date without approval by the Institutional Review Board.

Adverse Reactions: If any untoward incidents or severe reactions should develop as a result of this study, you are required to notify the Soc Beh IRB immediately. If necessary a member of the IRB will be assigned to look into the matter. If the problem is serious, approval may be withdrawn pending IRB review.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, or the investigators, please communicate your requested changes to the Soc Beh IRB. The new procedure is not to be initiated until the IRB approval has been given.

Please retain a copy of this letter with your approved protocol.