On the Precipice of Intersectionality: The Influence of Race, Gender, and Offense Severity Interactions on Probation Outcomes

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On the Precipice of Intersectionality: The Influence of Race, Gender, and Offense Severity Interactions on Probation Outcomes

Kevin F. Steinmetz¹ and Howard Henderson²

Abstract
This analysis examines the impact of established predictors on probation failure utilizing a large randomly selected sample of adult probationers. Initial findings suggest that race, gender, location, offense severity as well as risk assessment scores significantly predict probation failure. This study then examines interaction effects between race and gender as well as race and offense severity. Results indicate such interactions may matter in studying probation failure, despite reason to be cautious about their interpretation. Importantly, the results of the interaction model suggest that the interaction between being an African American and male is a significant predictor of probation failure. Additionally, being a Hispanic felon was also statistically significant. Theoretical, practical, and research implications are discussed alongside study limitations.

Keywords
probation, race, interaction effects, probation failure

Introduction
Numerous studies have examined the relationship between race, ethnicity, and correctional outcomes by focusing primarily on sentencing decisions and probation revocations. These findings have consistently demonstrated that Blacks are more likely than Whites and Hispanics to have their probation revoked as a result of new offenses and technical violations (Demuth, 2003; Demuth & Steffensmeier, 2004b; Dixon, 1995; Free, 2001; Freiburger & Hilinski, 2013; Hebert, 1997; Helms

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These studies have also shown that young males with a prior criminal record, currently serving felony probation and lacking a high school diploma are at an increased likelihood of probation revocation.

The current study investigates the role of race in probation failure. In particular, two separate logistic regression models are performed. The first examines race—among other factors—and its role in probation failure. A second model then incorporates interaction effects that are hypothesized to be important in predicting probation outcomes. One interaction is between race and gender—an interaction of particular interest because previous studies have found strong evidence that such an interaction matters in correctional outcomes (Demuth & Steffensmeier, 2004b; Freiburger & Hilinski, 2013; Leiber, Reitzel, & Mack, 2011; Steffensmeier, Ulmer, & Kramer, 1998). In addition, intersectionality theory (Crenshaw, 1993)—a perspective that states that social stratification statuses generate unique oppressive experiences not explained by the presence of any one social stratification status in isolation—indicates such interactions may shape probational experiences. In addition, this study investigates the relationship between race and offense severity. Although previous research has investigated the interaction between race and offense type—focusing on differences between property, drug, and violence offenses (e.g., see Bontrager, Bales, & Chiricos, 2005; Demuth & Steffensmeier, 2004a; Huebner & Bynum, 2008)—little research has investigated if there is an interactive relationship between race, offense severity (felony vs. misdemeanor), and probation. As we argue in this analysis, there is reason to believe such an interaction is worthy of consideration. With caution, this analysis then discusses the potential for intersectional race inequality in probation.

This study deviates from prior research through the outcome measure under question. Despite the contributions made by previous research on probation, much of this research has focused on probation revocation as a primary indicator of failure. Revocation, however, is more about judicial decision making than probation failure generally. Our measure of probation failure accounts for other ways through which an offender may be unsuccessful in their probation. We argue, therefore, that probation failure is a more robust and accurate measure of success (or a lack thereof) in the probation system as well as case supervision outcome. Thus, utilizing a large sample over an extended period of time (much longer than most research in the area), we seek to extend the literature by examining the interactions of race/ethnicity, gender, and offense severity on the probation outcomes (i.e., failure/success) of adult probationers.

Before describing the results, this study first briefly reviews the literature on probation and race, gender, and other factors. The results for each model are then presented, one without interaction effects and one with interaction effects. Implications of the analyses regarding race and its intersectional/interactional possibilities are discussed. This study then concludes with suggestions for future research and a review of this study’s limitations.

Prior Research

The relationship between race, criminal justice procedural differentials, and various correctional outcomes has garnered significant attention in the academic literature (Demuth, 2003; Demuth & Steffensmeier, 2004b; Dixon, 1995; Free, 2001; Freiburger & Hilinski, 2013; Hebert, 1997; Helms & Jacobs, 2002; Huebner & Bynum, 2008; Jacobs & Carmichael, 2002; Johnston & Alozie, 2001; Kleck, 1981; Morgan & Smith, 2008; Peterson & Hagan, 1984; Schlesinger, 2005; Vito et al., 2012). Despite this growing body of research, the results remain conflicting regarding the effect an offender’s race/ethnicity has on sentencing and criminal justice process outcomes. Additionally, within the dearth of scholarly inquiry of the race-criminal justice experience (i.e., sentencing decisions and postprison recidivism), little scholarly attention has been given to the relationship between race,
gender, and their related interaction effects on probation outcomes. This gap in research is vexing, given that almost 60% of the 7 million offenders under the control of the American criminal justice system are done so on probation (Glaze & Parks, 2012).

The following review of the literature focuses on multiple domains of probation research. First, the relationship between race and probation is reviewed with attention given to literature examining race and probation outcomes, risk assessments, and behavioral predictions. Then, we review the research on gender in probation. Attention is then given to the role of legal and locational variables in probation analyses. We conclude with a review of the interactional effect of the respective variables on probation outcomes.

Race

Race and probation outcomes. The focus of research examining the impact of race on probation outcomes has centered on new arrests and subsequent revocation. The existing research on race and probation outcomes has remained ambiguous, at best. It was Morgan (1994) and Roundtree, Edwards, and Parker (1984) who initially found that there was no relationship between the race of the probationer and his or her probation outcome. Clarke, Lin, & Wallace (1988) and Irish (1976), however, uncovered the contrary, noting that racial status significantly predicted an offender’s probation outcome. For Gray, Fields, and Maxwell (2001), race was not a significant predictor of probation success but it was for technical violations. Others have concluded that minorities had the greatest likelihood of being arrested while on probation and receiving a technical violation (Johnson & Jones, 1998; Olson & Lurigio, 2000). In short, the results are mixed regarding the impact of race on probation outcomes. Of those who have found racial/ethnic inequities, Black men have been the most likely to be rearrested and have their probation revoked (Gray, Fields, & Maxwell, 2001; Johnson & Jones, 1998; Morgan, 1994; Olson & Lurigio, 2000; Roundtree, Edwards, & Parker, 1984).

Race and behavioral predictions. One of the measures incorporated into this analysis is risk assessment scores. Risk-Needs assessment instruments are commonly used by correctional agencies to (1) determine the offender’s risk of recidivism and warranted service needs, (2) allow for a better allocation of the dwindling resources for the offenders rehabilitation, (3) reduce potential discriminatory decisions regarding offender classification, punishment, and intervention, and (4) decrease agency and officer liability when faced with accusations of subjectivity. To date, there has been widespread adoption of offender risk-need assessment instruments with the bulk of the scholarly inquiry focusing on their predictive validity. Although most of the research has focused on the ability of the instrument to predict correctional and behavioral outcomes of various offender types, few have sought to investigate their racial/ethnic predictive equity (Rembert, Henderson, & Pirtle, 2014; Whiteacre, 2006).

When examining the research regarding differential racial prediction, the results remain mixed. On one hand, numerous findings have demonstrated that of any racial/ethnic group, Black offenders had the greatest likelihood of being classified as high risk (Eisenburg, Bryle, & Fabelo, 2009; Henderson, 2006; Henderson, Daniel, Adams, & Rembert, 2007; Whiteacre, 2006; Yacus, 1998). Research has also demonstrated predictive bias with minority offenders being more likely to be overclassified (i.e., Type I error or false positive) (Rembert et al., 2014; Whiteacre, 2006). Findings additionally indicated a direct relationship between the number of Whites in the sample and the instruments’ predictability (Edens, Campbell, & Weir, 2007; Gendreau, Goggin, & Little, 1996; Leistico, Salekin, DeCoster, & Rogers, 2008). On the other hand, it must be noted that there exists some research that has demonstrated no predictive difference between Whites and racial/ethnic minorities (Edens et al., 2007; Guy, Edens, Anthony, & Douglas, 2005; Olver, Stockdale,
Wormith, 2009; Schwalbe, 2007; Skeem, Edens, Cam, & Colwell, 2004). Overwhelmingly, studies indicate that there remains a lack of clarity on the racially equitable predictability of risk assessment instruments, ultimately leaving the question of racially biased predictions unanswered.

**Gender and Probation Outcomes**

In addition to race, gender serves as a key variable in this analysis, and thus we provide a brief review of the gender equity research in probation. Findings from these studies demonstrate an unequivocal gender differential, when controlling for demographic and extralegal factors (see Koons-Witt, Sevigny, Burrow, & Hester, 2014 for a detailed examination). For the most part, the gamut of findings holds that not only are women less likely to be sentenced to probation, but women are more likely to successfully complete their supervision term (Clarke et al., 1988; Freiburger & Hilinski, 2013; Morgan, 1993). In fact, Morgan (1993) in a meta-review of 28 probation completion studies found that women had a greater likelihood of successfully completing probation.

Most recently, researchers have begun to find a greater level of equity between the probation outcomes of men and women (Gould, Pate, & Sarver, 2011; Schuleenberg, 2007). Kingsnorth, McIntosh, and Sutherland (2002) and Olson and Lurigio (2000) found no significant difference in the revocation rates of men and women. Others found that women were more likely to complete their probation sentences unsuccessfully (Mayzer, Gray, & Maxwell, 2004; Morgan, 1994; Olson, Alderden, & Lurigio, 2003; Sims & Jones, 1997). In short, the research examining gender differentials in probation completion are ambiguous.

**Contextual Variables**

When examining the effects of race on various probation outcomes, it has become common practice to determine the impact of legal and extralegal variables. Legal variables typically include measures such as seriousness of the instant offense and prior convictions (Freiburger & Hilinski, 2013; Johnson & Jones, 1998; Leiber et al., 2011; Tapia & Harris, 2006). More recently, others have begun to examine community-level contextual variables, such as the type of community, size, arrest and crime rates, and levels of concentrated disadvantage (Bontrager et al., 2005; Johnson & Jones, 1998).

Additionally, Spohn and Holleran (2000) found differences between three separate jurisdictions in prison sentencing. In essence, this finding supports the notion that location/jurisdiction may matter in and of itself. To account for potential locational differences, this analysis similarly controls for jurisdiction as an opportunity to identify macro-level jurisdictional and sociopolitical context differences (i.e., penal codes, sentencing policies, procedures, cultural contexts). In sum, location may matter in correctional outcomes.

**Interaction Effects**

Although most studies have examined the direct effects of race on correctional outcomes (Demuth, 2003; Demuth & Steffensmeier, 2004a; Dixon, 1995; Free, 2001; Freiburger & Hilinski, 2013; Hebert, 1997; Helms & Jacobs, 2002; Huebner & Bynum, 2008; Jacobs & Carmichael, 2002; Johnston & Alozie, 2001; Kleck, 1981; Morgan & Smith, 2008; Peterson & Hagan, 1984; Schlesinger, 2005; Vito et al., 2012), interaction effects may be more important to consider when studying the effects of race on correctional outcomes (Tapia & Harris, 2006). Examining the interactions between race and gender may illuminate various intersectional differences between various experiences of oppression and domination (Crenshaw, 1993), specifically those within criminal justice settings.
In studying various sentencing and correctional outcomes, multiple studies have explored interaction effects between key predictors such as those between race and gender (Demuth & Steffensmeier, 2004b; Leiber et al., 2011), race and age (Johnston & Alozie, 2001; Spohn & Holleran, 2000), gender and age (Spohn & Holleran, 2000), race and employment (Spohn & Holleran, 2000), gender and employment (Spohn & Holleran, 2000), race, gender, and age, (Freiburger & Hilinski, 2013; Steffensmeier et al., 1998), race and offense type (Bontrager et al., 2005; Demuth & Steffensmeier, 2004a; Huebner & Bynum, 2008), race and disadvantage/socioeconomic status (Bontrager et al., 2005; Huebner & Bynum, 2008), and even percent republication vote in an area, race, and gender (Helms & Jacobs, 2002). These studies have uncovered that interaction effects are generally important predictors in models seeking to understand probation outcomes. As such, including interaction effects in the study of predictive racial equity is theoretically and practically pertinent.

Although the existing literature makes the case for the significant impact of race, gender, and age (and their interactions) on sentencing outcomes, relatively little attention has been given to the effect of offense severity and its interaction with race in the area of probation. It is offense severity that hypothetically provides a dichotomous distinction between the seriousness of offenders and their likelihood of failure (Leiber et al., 2011). In effect, research demonstrates that felony probationers are more likely to reoffend and unsuccessfully complete probation than misdemeanors. Additionally, it is possible that felony offenders are subjected to greater duration and intensity in probation supervision—thus hinting that institutional factors, as opposed to individual proclivities, are at least partially responsible for an increased likelihood of failure among felony offenders. Either way, inclusion of offense severity in an analysis may capture procedural and institutional forces as well as potential categorical differences between misdemeanor and felony offender. Additionally, as race potentially affects these bureaucratic mechanisms, studies may want to consider interaction effects between race and offense severity on probation failure, a consideration this study addresses.

The Current Study

This study examined randomly selected cases of adult probationers from two large southwestern cities within the same state to determine the ability of race, location, offense severity, and behavioral assessment scores to predict probation failure. Assessing the applicability of the extant literature, which has held that there are different racial/ethnic probation outcomes resulting from main and interaction effects (Bontrager et al., 2005; Demuth & Steffensmeier, 2004b; Fennessy & Huss, 2013; Freiburger & Hilinski, 2013; Gabbidon & Greene, 2009; Helms & Jacobs, 2002; Huebner & Bynum, 2008; Johnston & Alozie, 2001; Leiber et al., 2011; Spohn & Holleran, 2000; Steffensmeier, Ulmer, Feldmeyer, & Harris, 2010; Steffensmeier et al., 1998), we test the idea that there may be different interaction effects and probation outcomes for these groups, relative to race/ethnicity and offense severity. As a result, the contribution of this study is twofold in that we test the findings of the extant institutional correctional literature within a sample of community-based probationers by examining the individual and interactional effects of race and gender in addition to race and offense severity on probation failure.

The analysis is organized in the following manner. First, the results of a logistic regression analysis are presented which examine the relationship between race and probation failure including all noninteraction effect predictors (race, gender, offense severity, location, and risk assessment score). The results of a second logistic regression analysis are then explicated, which include interaction effects between race and gender in addition to race and offense severity. In this study, the first model serves as a point of comparison for the second. Based on previous research, it would be expected that race (as well as gender) would be statistically significantly linked to probation failure. The first model will allow us to see whether this relationship manifests as expected. The second model then considers interaction effects. If the interaction effects are found to be significant compared to other
predictors, the presence of model one will allow for comparisons for the purposes of discussion. To clarify, the specific hypotheses of interest for this analysis are:

**Hypothesis 1:** The interaction between race/ethnicity (Black and Hispanic) and gender ($1 = \text{men}, 0 = \text{women}$) will have a statistically significant positive relationship with probation failure.

**Hypothesis 2:** The interaction between race/ethnicity (Black and Hispanic) and felony status will have a statistically significant positive relationship with probation failure.

For Hypothesis 1, we expect that—based on intersectionality theory and previous research in corrections—the combination of race and gender will render correctional outcomes worth noting beyond those predicted by either race or gender alone. Similarly, Hypothesis 2 is based on the notion that the combination of racial status and status as a felon (which should, based on past research, significantly predict probation failure) may interact together to predict probation failure beyond what either demographic variable could accomplish in isolation.

**Method**

**Participants**

Consistent with the racial/ethnic composition of the state’s probationers, proportionate numbers of Black, Hispanic, and White probationers 117,071 were randomly selected from a large southwestern state’s central repository of probation data. Each probationer was released from probation between September 1, 2000, and August 31, 2010, from two of the state’s largest counties. Each probation department is required to submit its offender data and probation closure type (i.e., successful or unsuccessful) to the state on a monthly basis. As noted in Table 1, a slight majority of the sample was Caucasian (41.3%), while the remaining participants were Black (40.3%) and Hispanic (18.5%). Approximately 21% of the sample did not complete high school and 83% possessed a high school diploma or general equivalency diploma. The average length of supervision time was 21 months ($SD = 25.41$), and a majority of the sample was placed on probation for a felony offense (54.2%). The average age of the sample was 28 ($SD = 11.34$) upon release from community supervision. Sixty-four percent of the offenders had never served a prior term on probation. It should also be noted that 89% of the sample were never convicted of a prior felony offense. The majority of probationers in this study are from City A (52.2%). Demographic comparisons were examined to determine the existence of significant differences between the racial groups on gender, risk scores, and offense severity of which there were no significant differences.

**Dependent and Independent Measures**

Predictors included in the logistic regression models include *race/ethnicity, gender, location, offense severity, and risk scores*. Race/ethnicity is measured through two dummy variables—Black ($1 = \text{Black}, 0 = \text{non-Black}$) and Hispanic ($1 = \text{Hispanic}, 0 = \text{non-Hispanic}$)—with the White racial category omitted to serve as the control group. Gender is measured as a dichotomous variable ($1 = \text{male}, 0 = \text{female}$). Men comprise the bulk of the probationer population in City A (68.0%) and City B (73.7%). *Location* is the predictor we use to control for the city and department under which the probationer is supervised ($1 = \text{City A}, 0 = \text{City B}$). Offense severity measures the seriousness of the charge against the probationer ($\text{felony} = 1; \text{misdemeanor} = 0$).

**Wisconsin risk needs assessment instrument.** In determining the effect of the assessed risk scores, the Wisconsin Risk Needs Assessment Instrument risk scores are utilized. The risk score is a summed
Table 1. Sample Characteristics.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Whites</th>
<th>Blacks</th>
<th>Hispanics</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>$\chi^2$</td>
<td>n</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>50,680</td>
<td>72.5</td>
<td>32,153</td>
<td>17,596</td>
</tr>
<tr>
<td>Women</td>
<td>19,228</td>
<td>27.5</td>
<td>15,010</td>
<td>4,012</td>
</tr>
<tr>
<td>Offense severity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Felony</td>
<td>36,013</td>
<td>51.5</td>
<td>27,484</td>
<td>10,963</td>
</tr>
<tr>
<td>Misdemeanor</td>
<td>33,895</td>
<td>48.5</td>
<td>19,678</td>
<td>10,645</td>
</tr>
<tr>
<td>Supervision/risk level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>20,324</td>
<td>29.1</td>
<td>17,451</td>
<td>6,419</td>
</tr>
<tr>
<td>Medium</td>
<td>32,993</td>
<td>47.2</td>
<td>20,993</td>
<td>10,172</td>
</tr>
<tr>
<td>Low</td>
<td>16,591</td>
<td>23.7</td>
<td>8,719</td>
<td>5,017</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City A</td>
<td>37,779</td>
<td>54.0</td>
<td>23,312</td>
<td>8,865</td>
</tr>
<tr>
<td>City B</td>
<td>132,129</td>
<td>46.0</td>
<td>23,851</td>
<td>12,743</td>
</tr>
<tr>
<td>Probation completion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>47,341</td>
<td>67.7</td>
<td>25,671</td>
<td>14,159</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>22,567</td>
<td>32.3</td>
<td>21,492</td>
<td>7,449</td>
</tr>
</tbody>
</table>

Note. All $\chi^2$ analysis were statistically significant at the $p < .001$ Level A.
total of the static and dynamic items on the instrument and range from 0 to 43. Premised on the risk of reoffending, these total scores are used to determine the offender’s level of supervision as minimum, medium, or maximum. According to the theory of risk, the higher an offender’s risk, the more intensive their level of supervision. Validity estimates for the Wisconsin using correlation coefficients have ranged from .27 to .68 on measures of rearrests while on probation (Gendreau et al., 1996; Harris, 1994) and from .16 to .53 on measures of supervision success (Connelly, 2003; Harris, 1994; Schauer, 1990). Previous studies examining the Wisconsin instrument’s relative improvement over chance (RIOC) rate have demonstrated no greater than 8% over chance predictions, with most indicating below chance accuracy (Connelly, 2003; Harris, 1994; Schauer, 1990). Finally, in predicting probation completion, prior research has demonstrated that the Wisconsin instrument’s RIOC has ranged from 24% to 55%, indicating a maximum accuracy of only 5% above chance (Connelly, 2003; Harris, 1994).

Probation outcome. Remaining consistent with the practical use of probation closure types, we operationalize the probation outcome measure dichotomously (1 = failure, 0 = success). At the agency level, each probation case is closed successfully or unsuccessfully upon the request of the supervising probation officer. Any violation of the probationer’s conditions of probation can serve as the basis for unsuccessful closure. This sample consisted of probation cases that were completed between the fiscal years of 2000–2010. As previously described, prior studies tend to rely on revocation as the outcome measure of choice, despite probation being a more robust estimate of probationer behavior. For example, there are cases where a probationer was unsuccessful in his or her probation, sentenced to treatment, yet his or her case was never revoked. In this way, standard approaches that only examine revocation fail to account for alternative ways to fail probation. Probation completion data were collected from the state database of probation closures, which is the central repository that all probation departments in the state submit their closure data, along with demographic, assessment, prescribed treatment modalities, and offender responses.

Statistical Analysis

In this study, the dependent variable of concern is probation failure. Throughout the analysis, interaction effects are incorporated which follow suggestions made by prior research (Freiburger & Hilinski, 2013; Koons-Witt, Sevigny, Burrow, & Hester, 2014) with slight modifications made to account for the data characteristics of our study. Previous research supports the idea that race and gender may be better predictors of probation outcomes than either variable alone (Bontrager et al., 2005; Demuth & Steffensmeier, 2004b; Freiburger & Hilinski, 2013; Huebner & Bynum, 2008; Johnston & Alozie, 2001; Leiber et al., 2011; Spohn & Holleran, 2000; Steffensmeier et al., 1998). Therefore, we initially examine the interaction effects between race and gender. The interactions of race and offense severity are also considered.

The current study also makes use of the McFadden $R^2$ ($R_{L}^2$) statistic rather than the Nagelkerke’s $R^2$. The $R_{L}^2$ statistic is based on the $-2$ log likelihood rather than the sum of squared errors (Menard, 2010). As a result, the $R_{L}^2$ is more appropriate to use in logistic regression analyses rather than explained variation statistics, which were made specifically for ordinary least squares regression analyses. In addition, the outcome variable used in this study—probation failure—is a truly dichotomous variable rather than one which represents an underlying continuous variable. In this case, $R_{L}^2$ is an appropriate measure of explained variation in the likelihood the outcome occurs because concerns about underestimation of the strength of the relationship between predictors and the outcome measure are only salient when the outcome is a crude measure of an underlying continuous variable (DeMaris, 1992; Menard, 2010).
Results

To determine the impact of race, gender, location, offense severity, and risk assessment scores on probation failure, two models were conducted and analyzed. The initial model demonstrates the effect of the before-mentioned variables on the outcome measure (see Table 2). In the second model, the effect of the interactions of race and gender, offense severity, and overall risk score on probation outcome are presented (see Table 3). Overall, both models were found to be significant ($p < .001$).

The results of the initial model indicate that all of the variables were found to be significantly predictive ($p < .001$) of probation failure. In short, being Black ($\beta = 1.306$) or Hispanic ($\beta = 1.065$), being male ($\beta = 1.201$), having served on probation in City A ($\beta = 1.152$), for a felony offense ($\beta = 1.399$), and having higher assessed risk ($\beta = 2.178$) scores significantly increased the odds of unsuccessful probation completion.

As should be expected, given that they are a collective of predictor variables, the risk assessment scores were found to be the greatest predictors of probation failure, as determined by relative magnitude ($\beta = 2.178$), followed by offense severity ($\beta = 1.399$), and being Black ($\beta = 1.306$).

Interaction Effects

The second model estimates the interaction effects of race with gender and offense severity on unsuccessful probation completion (see Table 3). As expected, like the previous analysis of the individual-level predictors, this model, with its interaction terms included, is also statistically significant ($p < .001$) with slightly increased explained variation compared to the first model ($R^2_L = .141$). The variation explained is not much higher than for the noninteractive model. As such, the demands of simplicity in statistical modeling dictate that the interaction effect model may not contribute much beyond the first model in our understanding of probation failure. Because of the findings of previous research, as well as theorizing on intersectionality, this analysis will still examine the results of the second model as there are still findings worth noting, even if the analysis must be approached trepidatiously.

The interaction effects indicate that both Black men ($\beta = 1.188; p < .001$) and Hispanic men ($\beta = 1.089; p < .001$) were significantly more likely than White women to unsuccessfully complete probation. Recall that in the noninteraction effect model, being Black was the third most powerful predictor. In the interaction effect model, the interaction effect between Black and gender ($\beta = 1.188, p < 0.001$) was statistically significant, indicating that while being Black alone is a potent predictor, there may be reason to believe that probation outcomes depend on a combination of race and gender. Similar effects in this model were seen for the interaction between

### Table 2. Logistic Regression on Probation Failure.

<table>
<thead>
<tr>
<th></th>
<th>$b$</th>
<th>$\beta$</th>
<th>$\text{Exp}(b)$</th>
<th>$SE$</th>
<th>$z$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>.544*</td>
<td>1.306</td>
<td>1.723</td>
<td>0.025</td>
<td>36.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.163*</td>
<td>1.065</td>
<td>1.177</td>
<td>0.023</td>
<td>8.5</td>
</tr>
<tr>
<td>Gender</td>
<td>.403*</td>
<td>1.201</td>
<td>1.496</td>
<td>0.023</td>
<td>26.45</td>
</tr>
<tr>
<td>Location</td>
<td>.284*</td>
<td>1.152</td>
<td>1.329</td>
<td>0.019</td>
<td>20.36</td>
</tr>
<tr>
<td>Offense severity</td>
<td>.674*</td>
<td>1.399</td>
<td>1.962</td>
<td>0.027</td>
<td>49.23</td>
</tr>
<tr>
<td>Risk score</td>
<td>.105*</td>
<td>2.178</td>
<td>1.11</td>
<td>0.001</td>
<td>103.46</td>
</tr>
</tbody>
</table>

$-2 \text{Log likelihood}$ = $66,694.288$

$R^2_L = .14$

$\chi^2 = 21,671.04^*$

*Note. $N = 117,071$.  
*$p < .001$. 

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Hispanic and gender ($\beta = 1.089$, $p < .001$). Additionally, the interaction between Hispanic and offense severity indicates that Hispanic felony offenders appeared more likely to fail probation compared to non-Hispanic misdemeanants in our sample ($p < .001$). Interestingly, the interaction between being Black and a felony probationer was not significant. Overall, the results provide partial support for our hypothesis. The interaction between race and gender seemed to be a noteworthy predictor of probation failure. For the interaction effects between race and offense severity, the results indicated that the term was statistically significant for Hispanic felons but no significant findings were yielded for Black and offense severity at the individual level. These conclusions, however, must be considered cautiously as differences in model fit between the interactive and noninteractive models are marginal, at best. While evidence exists here supporting the interaction effects, simplicity points toward noninteractive effects being more important for understanding probation in this sample. The implications for these findings are detailed below.

### Discussion

Questions of racial equity within corrections have a long history. Unfortunately, despite probation being the most widely used correctional option, examinations of differential racial/ethnic outcomes remain more common in prison research. Consequently, this study is the first to examine the interactional effect of race, gender, and offense severity on the probation failure. Probation failure is a more robust assessment of probationer behavior and case outcome than the more often used measure of revocation, which is not independent of court action. These findings also extend the extant literature regarding predictive racial equity within the most commonly used correctional apparatus (i.e., probation).

Our findings extend the previous research that holds there is a unique minority probation experience. These data revealed that minorities are more likely than Whites to unsuccessfully complete probation. Since, however, the $R^2$ value for the interaction effect model only marginally increased over the noninteraction effect model, the principle of parsimony leads to the conclusion that race is perhaps the most noteworthy variable to consider in this analysis, as opposed to its related

### Table 3. Logistic Regression on Probation Failure Including Interaction Effects.

<table>
<thead>
<tr>
<th></th>
<th>$b$</th>
<th>$\beta$</th>
<th>Exp($b$)</th>
<th>SE</th>
<th>z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>.266*</td>
<td>1.139</td>
<td>1.304</td>
<td>0.042</td>
<td>8.12</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-.157*</td>
<td>0.941</td>
<td>0.855</td>
<td>0.043</td>
<td>-3.12</td>
</tr>
<tr>
<td>Gender</td>
<td>-.192*</td>
<td>1.091</td>
<td>1.212</td>
<td>0.028</td>
<td>8.2</td>
</tr>
<tr>
<td>Location</td>
<td>.285**</td>
<td>1.153</td>
<td>1.33</td>
<td>0.019</td>
<td>20.36</td>
</tr>
<tr>
<td>Offense severity</td>
<td>.626**</td>
<td>1.366</td>
<td>1.473</td>
<td>0.041</td>
<td>28.78</td>
</tr>
<tr>
<td>Risk score</td>
<td>.104**</td>
<td>2.177</td>
<td>1.11</td>
<td>0.001</td>
<td>103.24</td>
</tr>
<tr>
<td>Gender interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>.387**</td>
<td>1.188</td>
<td>1.473</td>
<td>0.048</td>
<td>11.98</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.238**</td>
<td>1.089</td>
<td>1.27</td>
<td>0.063</td>
<td>4.8</td>
</tr>
<tr>
<td>Offense severity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>.006</td>
<td>1.003</td>
<td>1.006</td>
<td>0.03</td>
<td>0.21</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.247**</td>
<td>1.075</td>
<td>1.281</td>
<td>0.05</td>
<td>6.39</td>
</tr>
</tbody>
</table>

$\chi^2 = 21,862.47^{**}$

Note. $N = 117,071$.

* $p < .01$. ** $p < .001$.
interaction effect with gender. In other words, despite previous research on probation, the interaction between race and gender may not be as important as race in isolation.

We are reluctant, however, to wholly dismiss the interaction effect model. Although it does introduce additional complexity, which flies in the face of simplicity, it does indicate there may be cause to entertain the idea of an intersectional experience within probation. Considering that (1) previous research and theorizing emphasize the importance of such interactions and (2) our results do not definitely rule out such effects, this study still argues that it is worthwhile to mull over reasons why the interaction between race and gender may matter in probation. We hypothesize that the reason such an interaction may have been significant stems from the stigma Black men carry in our society. As Alexander (2010) writes:

... Black men today are stigmatized by mass incarceration—and the social construction of the “criminalblackman”—whether they have ever been to prison or not. For those who have been branded, the branding serves to intensify and deepen the racial stigma, as they are constantly reminded in virtually every contact they have with public agencies, as well as with private employers and landlords, that they are the new “untouchables.” (p. 199; see also Russell, 1988)

As argued by Alexander (2010), the trifecta of youth, masculinity, and being Black is conflated with the identity of criminality, thus creating a socially constructed image bearing real consequences for offenders.

Broader structural issues, however, impact the Black population more generally. In other words, historical legacies—like those of structural inequality, racism, colonialism, and so on—that impact Blacks more generally may have more to do with the results of this analysis rather than the notion of the “criminalblackman” specifically (Alexander, 2010; Pager, 2003; Tatum, 2000). These factors could help explain why Black persons are more likely to fail probation. These historical cultural forces may influence the day-to-day lived experiences of Blacks as well as their interactions with institutional sources of power and authority, such as criminal justice. In other words, from our sample, the results indicate that race may be more important to consider in isolation—which contradicts previous research—but these results are not a definite strike against intersectionality in probation.

It should also be noted that Hispanic men were also significantly associated with probation failure in the sample. The magnitude of the effect size, however, was less than the interaction for Blacks. The Hispanic population in this sample, however, may still be suffering from a range of factors, which contribute to their increased chances of probation failure. It is these disproportionalities resulting from an offender’s ascribed class, without random application, which possibly serve as a violation of their human rights and may serve as an indication of systematic discrimination, an issue warranting of further scholarly inquiry. Again, however, the results here must be considered carefully.

Our findings demonstrated that being on probation in City A was a significant predictor of probation failure, unlike probationers in City B, a finding that must be assessed with caution as it has been argued that examinations of differential prediction should be subject to more stringent statistical techniques (i.e., multilevel models as opposed to traditional regression analysis, e.g., see Onifade, Davidson, & Campbell, 2009; Schwalbe, Fraser, Day, & Cooley, 2006). Doing so would allow for a more intricate understanding of the impact that community and sociopolitical variables have on the outcome measure under question, as these factors have been shown to have a different expression within minority communities. Therefore, a clearer understanding of these community-level factors could potentially explain the minority status’s ability to significantly predict probation failure.

Regression analyses also indicated that, when interaction effects were considered, Hispanic felons may face greater odds of completing probation unsuccessfully. This finding suggests there is something about being a Latino/Hispanic felon compared to Whites misdemeanants generally that
impacts likelihood of probation failure. It could be that there is a qualitative difference between Hispanic felons and other types of felony offenders (or the way they are treated). Future research should investigate this finding further, particularly in light of the trepidation with which we approach this conclusion. Perhaps just as interesting, however, is that the interaction between being Black and felony status was not statistically significant. In this sense, it did not seem to matter if a Black person was on probation for a misdemeanor or a more serious felony.

The finding that the risk scores were a significant predictor is consistent with the original intent of the instrument and previous research. This result is to be expected as the instrument is a collective of previously established predictive items. Perhaps more interesting is the finding that higher risked minorities are at a greater likelihood of unsuccessful probation completion than equally situated Whites. More recent research has suggested that this inequity may be a result of instrumentation bias (Rembert et al., 2014; Singh & Fazel, 2010; Whiteacre, 2006). Such conclusions are of substantive importance, as these scores determine the extent and degree of supervision and treatment modalities, both of which have been shown to mitigate probation outcomes. Continued examination of this predictive disproportionality is warranted.

**Future Research Implications**

Regardless of the extensive history of racial and ethnic criminal justice system outcome differentials, there remains a lack of research regarding interaction effects on probation failure. Of those who have, the results remain ambiguous. Our findings indicate that, despite probation as a low-cost, community-based, treatment-oriented alternative to incarceration, an offender’s minority status remains an inhibitor of criminal justice success. Thus, more effort should be given to assess the underlying factors that increase the likelihood of differential probation outcomes for African American and Hispanic probationers, with the ultimate goal of reducing criminal justice racial/ethnic inequities. Addressing these differences may be more amenable to understanding in the probation realm, as these offenders are more likely to not have experienced the debilitating effect of incarceration (Gould et al., 2011). Moreover, there are fewer barriers to successful probation completion, given that the traditional psychological and structural challenges that result from incarceration are (mostly) absent under probation. Future research examining the impact of race/ethnicity on successful probation completion is well warranted as well. For example, studies may want to consider, in tandem, how one’s race/ethnicity affects probation completion in comparison to other correctional alternatives (i.e., prison reentry, parole, etc.).

For a more holistic understanding of the effect of race, probation outcomes should be situated within the broader sociopolitical structure of minority status in society. Perhaps even conducting more international comparisons would be worthwhile to isolate the impact of culture. Qualitative inquiries investigating the lived experiences of minorities—with special attention paid to men—going through probation would also be beneficial, particularly as most research sensitive to intersectionality has focused largely on Black women (Nash, 2008). Finally, the correlation between race/ethnicity and class in America has been well established (see Wacquant, 2010). Nonetheless, examinations of class within corrections remain limited (Breunig & Ernst, 2011). Therefore, future research would do well to examine the sociopolitico-class relationship within corrections, and more to our point, probation. Previous research has considered related constructs such as disadvantage/socioeconomic status (Bontrager et al., 2005; Huebner & Bynum, 2008), but further research is needed.

**Limitations**

Despite its contributions, there are a few limitations that must be noted. The extant probation literature has used varying outcome measures (i.e., rearrest, reconviction, and probation failure), yet all
of these have been shown to be directly impacted by racial/ethnic, gender, and class disproportiona-
tilities. As a result, it should be assumed that any probation outcome measure used, any criminal jus-
tice outcome, for that matter, potentially is exacerbated by these demographic criminal justice realities (Holsinger, Lowenkamp, & Latessa, 2006; Vincent, Chapman, & Cook, 2011). Of our sam-
ple, though Blacks and Whites comprised the greatest majority, at 41% and 40%, respectively,
Blacks had the greatest likelihood of probation failure. It should be noted that Blacks represent only
11% of this state’s population, thus they are disproportionately placed on probation and are failing.
Therefore, it is plausible to assume the possibility of the overrepresentations affecting our results and
ultimately biasing the degree to which the predictors affect the outcome measure (Warren, Chiricos,
& Bales, 2012). In short, our results are dependent upon the outcome measure of choice. Therefore,
it is recommended that future research seeking to determine predictive equity be contextualized
within the context of the various motivations for probation closure types (such as positive drug test,
rearrests, etc.) and their potential intervening variables.

We must also note that our outcome measure is subject to potential treatment effects recom-
mended by the assessment instrument and/or officer directives (Hosp, Hosp, & Dole, 2011). In
effect, there are potential treatment implementations and supervision effects that could affect the
likelihood of probation failure of which we were not able to measure. Consequently, it is recom-
mended that further correctional outcome inquiries examine the impact of treatment modalities.
An additional limitation is also recognized here concerning the focus on intersectionality concerning
race and other factors. In particular, intersectionality research often focuses on the particular rather
than the universal (e.g., “being Black” vs. “being human”), which may serve to reify racial differ-
ences at the same time racial problems are being isolated (Mitchell, 2013). The tendency of quanti-
tative research is to focus on the particular and, as such, supplemental qualitative or mixed-methods
research may be warranted as these approaches may more adequately be able to consider both the
particular and universal.

Finally, we must restate the limitation of the interaction effect model included in this study. The
$R^2$ value did not substantively increase once the interaction effects were included. As such, the
demands of parsimony dictate that the noninteractive model may be more appropriate for explaining
probation failure in our sample. We are hesitant to abandon the interaction effect model entirely,
however, as previous research and theorizing indicate interaction effects are worth consideration.
For this reason, we consider our study to be on the precipice of intersectionality, rather than fully
supportive of such conclusions. Regardless, the study clearly indicates that, while the findings for
the interaction effects may be left wanting, evidence was clearly found that race is generally a sig-
nificant predictor of probation failure.

**Conclusion**

To date, most of the corrections-based research examining racial differentials has focused on
institutional corrections, despite the fact that approximately 57% of offenders in the criminal
justice system are under the purview of probation. Our findings extend the existing literature,
through the utilization of one of the largest data sets of probationers analyzed to date, finding
that there are different racial/ethnic experiences for offenders in our sample. The results raise
controversial yet warranted questions regarding the ability of a supposedly objective offender
behavioral assessment to predict equitably. On one hand, all offenders are processed through
the same system, yet there are differential outcomes relative to demographic characteristics.
As a result, more research is suggested so that we are better able to understand the applicability
of the somewhat universal impact race/ethnicity and any underlying, often underexamined, fac-
tors have on probation failure.
Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Notes

1. The Wisconsin Risk Assessment Instrument, commonly referred to as the Wisconsin, was developed in the 1970s to be utilized with parole and probationers in determining risk level, supervision level, and treatment needs. The Wisconsin is recognized as the most widely adopted risk needs assessment in the United States. Despite such widespread continual state agency adoption, the Wisconsin risk assessment instrument has received limited research attention, unlike the Level of Service Inventory–Revised. For a detailed history and critical analysis of this instrument, see Henderson and Miller (2011).

2. The term “measure of explained variation” rather than “model fit” is used here. “Goodness of fit” applies to statistics, which attempt to measure the “difference between the observed model and the best possible model (all possible predictors, including interactions)” (Menard, 2010, p. 49). With $R^2_L$, the measure is “based on the comparison of the observed model with a model in which there are no predictors [italics in original]”—more appropriately termed “measure of explained variation” (Menard, 2010, p. 49).

3. This analysis primarily presents standardized coefficients rather than odds ratios. Odds ratios have often been favored in conducting interpretations of logistic regression models. We hold that standardized coefficients may yield more useful information as: “The odds ratio, just like the unstandardized logistic regression coefficient, is neither a standardized coefficient nor a measure of effect size. It contains the same information as the unstandardized logistic regression coefficient or the probability” (Menard, 2010, p. 95).

References


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