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## Race, Gender, and Program Type as Predictive Risk Factors of Recidivism for Juvenile Offenders in Georgia

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## Race, Gender, and Program Type as Predictive Risk Factors of Recidivism for Juvenile Offenders in Georgia

### Cover Page Footnote

The data used in this study were provided by Dr. Gillis of Georgia College and State University. The authors wish to acknowledge the cooperation by Dr. Gillis. The Analyses and interpretations of the data, however, are those of the authors.

## **Introduction**

The juvenile justice system of the United States focuses on rehabilitation rather than punishment. Recidivism, which generally refers to reoffending following release from custody or treatment, is therefore an important concept in all aspects of the juvenile justice system. It can be used to assess the juvenile justice system's successes or failures, including which juvenile treatment programs are better than others. It can help identify chronic offenders. It can even help scholars understand how offenders react to their experience behind bars. Recidivism rates are valuable tools in the task of understanding what best helps juvenile offenders succeed on their path to rehabilitation.

Certain characteristics are closely tied to juvenile recidivism. Characteristics such as age (Farrington 1991; Gottredson and Hirschi 1990), mental health (Yampolskaya and Chuang 2012), sexual abuse (Conrad et al. 2014), and substance abuse (van der Put, Creemers, and Hoeve 2014) have, among others, been linked to juvenile recidivism. Race and gender have demonstrated strong correlations with juvenile recidivism. These relationships have been recorded for decades, and these attributes have been thought to be effective predictors of reoffending (Heilbrun and Heilbrun 1977; Wierson and Forehand 1995; Strom 2000; Langan and Levin 2002). However, these claims are difficult to support. This is partially due to the lack of any official juvenile recidivism rate, the reason for which is the greatly varied methods of defining and measuring juvenile recidivism from state to state. Because of this, potential effects on recidivism rates can generally only be analyzed using data from a single state. Nonetheless, single-state studies continue to broaden the general understanding of juvenile recidivism, the importance of which is paramount for the accurate application of treatment.

### **Varying Definitions and Measurements of Recidivism**

Juvenile recidivism is a difficult concept to measure. The Office of Juvenile Justice and Delinquency Prevention cites this as the reason for not having a defined national juvenile recidivism rate (Sickmund and Snyder 2006). The report states that "such a rate would not have much meaning since juvenile justice systems vary so much across states" (Sickmund and Snyder 2006, p.234). In fact, this creates many misleading figures regarding juvenile recidivism. In states that use rearrest as a measure of juvenile recidivism, the recorded rate of juveniles who recidivate is notably higher than in those states who use reconviction or reincarceration as the point of measurement (Snyder and Sickmund 2006). There are various considerations in determining how recidivism should be measured. The state of Georgia uses readjudication, or the processing of a case to the point of requiring final judgment by a juvenile court, and reconviction as a measure of recidivism (Department of Juvenile Justice 2011).

In addition to measuring the effects that race and gender have on recidivism rates, determining which programs work best at preventing recidivism is an equally pressing matter. Using a Georgia Department of Juvenile Justice dataset, the current study aims to identify the effects of race and gender on juvenile recidivism, as well as the effectiveness of different juvenile justice program types in the state of Georgia. In doing so, trends specific to the state of Georgia may be exposed, and previous research will be replicated, testing the generalizability of those findings.

### **Literature Review**

Race and gender have long been associated with juvenile crime, delinquency, and recidivism (Strom 2000; Langan and Levin 2002; Snyder and Sickmund 2006; Georgia Department of Juvenile Justice 2011). Data collections on both the state and federal level have made it clear that certain relationships exist between juvenile crime and these attributes (Langan and Levin 2002; Snyder and Sickmund 2006; Strom, 2000). In addition to race and gender, juvenile program type has a rich pool of empirical research (Kim, Merlo, and Benekos 2013; Klenowski, Bell, and Dodson 2010; Bontrager, Winokur, Hand, and Chapman 2013; Lipsey 2009; Greenwood 1996; Henggeler 1994; Austin, Johnson, and Weitzer 2005; Jewell et al. 2015; Ryan, Abrams, and Huang 2014; Evans-Chase and Zhou 2014; Howell, Lipsey, Wilson, and Howell 2014). Researchers are in consensus regarding which programs are best in keeping juveniles from recidivating. A closer inspection of the current literature on these topics is required in order to provide context of the current study's findings.

### **Race and recidivism**

Disparately large amounts of racial and ethnic minorities make up the population of the juvenile justice system. Data collections suggest that racial minorities, especially black juveniles, are much more likely to be arrested (Georgia Department of Juvenile Justice 2011; Langan and Levin 2002; Snyder and Sickmund 2006; Strom 2000) than white youths. The trend continues in regards to recidivism. According to a recidivism report by the Georgia Department of Juvenile Justice (2011), "delinquent recidivism rates continue to be disproportionately high for male and black populations." (p.14) With the exception of 2007, the rate of delinquent recidivism by black youths in Georgia has been increasing since 2003 (Georgia Department of Juvenile Justice 2011). This pattern continues when applied to the federal scope. In a report by the Bureau of Justice Statistics, over 70% of black offenders released over the course of a year were rearrested, and over half were reconvicted (Langan and Levin 2002).

While the evidence speaks to the trends of disproportionately large numbers of minority youths in the juvenile justice system, recent studies have emerged to test whether race in itself should be considered a risk factor for offending. Mbuba (2005) found that if all other things are held relatively constant, race does not have a significant relationship with recidivism. Other influential factors, such as where the offenders live and socio economic status, were more likely to serve as dependable predictors of recidivism. This study consisted of 2,810 youths in Louisiana, and monitored each case for recidivism for one year following release. These findings are not isolated in the pool of empirical evidence concerning race and recidivism.

A later study by Yan supports these findings, noting that all other things equal, race does not directly influence recidivism (2009). A 2013 study by Conrad et al. found that "recidivists did not differ from nonrecidivists on...race/ethnicity" (p.5). It is possible to conclude that even though more minority juvenile offenders recidivate than their white cohorts, their race does not directly put them at a higher risk for returning to the juvenile justice system. In other words, minority status does not inherently suggest a higher level of criminality, leading to higher recidivism rates. Rather, the indirect effects of race on recidivism, such as those found in previous research, may better explain those disparities.

### **Gender and recidivism**

Gender, as a risk factor for offending, is sometimes taken for granted. It is understood that crime is largely committed by males (Langan and Levin 2002). This trend continues into juvenile delinquency data. Boys consistently offend at a higher level than girls (Strom 2000; Langan and Levin 2002). This means that regardless of race, age, socio economic status, or other risk factors, boys always have a higher rate of offending. This is consistent with Farrington et al.'s study of 808 juveniles in Seattle (2010). The researchers found that, according to self-reporting done within the study, boys were more likely to offend than girls.

The relationship that gender has with recidivism tells a similar story. According to the Georgia Department of Juvenile Justice, males recidivate at almost double the rate of females (2011). This data supports the findings from recent studies. Minor et al. (2008) found that "gender was a significant predictor of recidivism", with males recidivating much more frequently than females (p.180). According to Yan (2009), males not only recidivate more often, but they recidivate more seriously than females. These studies offer a snapshot of the current research climate regarding gender and delinquency.

## **Program Type and Recidivism**

The literature concerning juvenile justice programming is somewhat repetitive. There seems to be an overwhelming consensus that youths do not respond well to custodial or punitive sanctions (Kim, Merlo, and Benekos 2013; Klenowski, Bell, and Dodson 2010; Bontrager, Winokur, Hand, and Chapman 2013; Lipsey 2009; Greenwood 1996; Henggeler 1994; Austin, Johnson, and Weitzer 2005), and instead seem to do best when subjected to therapy based dispositions (Jewell et al. 2015; Ryan, Abrams, and Huang 2014; Lipsey 2009; Evans-Chase and Zhou 2014; Howell, Lipsey, Wilson, and Howell 2014). While some researchers concede that juvenile programming is not a "one-size fits all" operation, all of the research concurs that punishment or incapacitation focused programs tend not to be the best fit for almost any youth (Howell, Lipsey, Wilson, and Howell 2014).

Given the large number of existing studies conducted throughout the past few decades, the best way to get an accurate and relevant snapshot of the literature regarding juvenile justice interventions is through the handful of meta-analyses available for review. Perhaps the most influential and thorough of all such studies performed in the past few years is Lipsey's (2009) meta-analysis containing 548 studies. Through careful statistical analyses, Lipsey compiled a working list of which intervention types have positive and negative effects on juvenile recidivism rates. Counseling, skill building, restorative, and surveillance programs all were effective in reducing recidivism rates, with the strongest effects occurring with counseling and skill building programs (Lipsey 2009). The only two types of intervention that were found to increase recidivism rates among youth were deterrence and discipline based programs, with the negative effects of discipline programming far exceeding that of deterrence programs (Lipsey 2009).

A series of smaller meta-analyses have been conducted in the wake of Lipsey's thorough 2009 research. In their analysis of 230 studies ranging from 1978 to 2009, Kim et al. (2013) found that "what works for adults does not necessarily transfer to juveniles" (p. 182). The authors found that boot camps, scared straight (awareness programs), and other punitive sanctions were not shown to reduce recidivism in juveniles. Instead, it was shown that supervision (as in probation, community, etc) and therapeutic treatment was shown to be a better solution to recidivism (Kim, Merlo, and Benekos 2013). In agreement with Kim et al., a 2010 study by Klenowski et al. found, after reviewing 12 studies, that awareness programs such as scared straight do not effectively reduce recidivism. In some instances, these programs were actually found to increase recidivism, as they further alienated the youth from positive influences (Klenowski, Bell, and Dodson, 2010). A final meta-analysis by Evans-Chase and Zhou (2014) consisted of 21 studies. In this research, it was found that compared

with behavioral control programs, therapy based programs were more effective in reducing recidivism.

Aside from the above research efforts, it is necessary to look at a select few works in order to help fill the gaps left by the general conclusions drawn in the meta-analyses. Jewell et al. (2015) found that after controlling for such factors as sex, ethnicity, age, prior petitions (juvenile justice contact), and severity of prior petitions, juvenile probationers that completed a therapy-based program showed long-term decreases in recidivism rates. Delving into the supervision programs further, a look at Ryan et al.'s (2014) study of 7,288 Los Angeles first-time violent juvenile probationers is necessary. When differentiating between in-home probation (non custodial), group home probation (custodial), and probation camps (custodial), it was found that in-home probation yielded the lowest recidivism rates of the three. Group home probation yielded recidivism rates 1.28 times that of in-home probation, and probation camps yielded rates 2.12 times that of in-home probation (Ryan, Abrams, and Huang 2014). Bontrager et al. (2013) found similar results in their Connecticut study of 2,823 juveniles. The authors found that restrictive residential placements tend to create higher recidivism rates among youths (Bontrager, Winokur, Hand, and Chapman 2013).

The argument against boot camps, which surfaced in the meta-analyses, is bolstered by earlier expert statements. During a review of the literature, Greenwood (1996) determined that shock incarceration simply does not work, and is instead likely to cause increased chances of reoffending in some instances. In a 1994 work, Henggeler makes arguments for three broad points: boot camps do not reduce crime, boot camps do not address the root cause of offending, and while they may punish and incapacitate, boot camps do not reduce juvenile delinquency.

Final expert thoughts on the notion of rehabilitation versus punitive programs as effective means of reducing juvenile recidivism help to paint the larger picture of what is now mostly understood in modern criminology. In their work which addresses alternatives to the confinement of juveniles, Austin et al. (2005) state that the most effective treatment options are non custodial in nature. Their rationale for this is found in the statement "detaining or confining youth may also widen the gulf between the youth and positive influences" (Austin, Johnson, and Weitzer 2005, p. 2). In congruence with this, Howell et al. (2014) state that therapeutic programs tend to work much better than control-oriented programs. However, the authors go on to explain a sentiment that is becoming increasingly common knowledge in correctional practices. According to the researchers, "juvenile justice systems must deliver the *right service*, to the *right youth*, at the *right time*". This solidifies the notion that there is most likely not any one treatment option that will be effective for all youthful offenders. The only constant in the literature is that rehabilitation and therapeutic focuses are more effective than punitive sanctions for reducing juvenile recidivism.

## **Hypotheses**

The present study will initially test the bivariate analysis of the effect of gender and race on recidivism rates of juveniles utilizing Crosstabs and Chi-square test. The first hypothesis is that black juveniles recidivate at a higher rate than white and other juveniles. The second hypothesis is that male juveniles recidivate at a higher rate than female juveniles. Following these initial tests, the present study will then attempt to determine whether these relationships stand when controlling for other variables that may affect recidivism rates. Additionally, the effects of program type on recidivism will be tested during this stage. Using logistic regression analysis, the present study will then test three more hypotheses. The third hypothesis is that after controlling for other influential factors, black juvenile offenders are more likely to recidivate than white and other juvenile offenders are. The fourth hypothesis is that after controlling for other influential factors, male juvenile offenders are still more likely to recidivate than female juvenile offenders are. The fifth and final hypothesis is that after controlling for other influential factors, both male and female juvenile offenders that receive therapy-based treatment are less likely to recidivate than juvenile offenders that received custodial dispositions.

## **Methodology**

### **Data**

The dataset is an archival collection (N = 12,030), and was obtained from the Georgia Department of Juvenile Justice (Gillis, Gass, and Russell 2008; Gillis and Gass 2010). It includes all offenders committed to the state by juvenile courts between April 1989 and June 2003, and released between January 1990 and October 2003 that were in custody for 14 days to one year. The cases were monitored for three years following release in order to record recidivism characteristics. The dataset ranged in age from 8-18 years old. In order to remove outliers on the young side of this spectrum, only ages 12-18 were used. The 152 cases where age at first offense was committed during the ages of 8-11 were omitted from the analysis.

### **Variables**

The summary of the study variables is in *Table 1*. Recidivism was outlined as receiving a disposition as a result of a re-offense. Technical violations and status offenses were included, but revocations and informal adjustments were not. The percentage of the sample cases that ended in recidivism within three years of release was 47.9%. White youths made up 32.9% and black youths made up 65.3% of the cases, and "other" accounted for 1.8% of the sample. Age at first offense was also included, ranging from 12-18 years old, for which the mean was



15.0. The percentage of male youths was 89.2, with female juveniles accounting for the remaining 10.8%.

**Table 1** Summary of Variables

Variable	N	Percentage
<i>Recidivism within three years</i>	(N = 12,030)	
Yes	5,762	47.9
No	6,268	52.1
<i>Race</i>	(N = 12,030)	
White	3,956	32.9
Black	7,854	65.3
Other	220	1.8
<i>Gender</i>	(N = 12,030)	
Male	10,733	89.2
Female	1,297	10.8
<i>Age at first offense</i>	(N = 11,878)	
12	393	3.3
13	992	8.4
14	2,221	18.7
15	3,710	31.2
16	4,147	35.9
17	407	3.4
18	8	0.1
<i>Program type</i>	(N = 12,018)	
Wilderness	1,395	11.6
Specialized Programs	1,023	8.5
YDC	8,241	68.6
BMtA	1,359	11.3
<i>Most serious offense classification</i>	(N = 12,030)	
Status	614	5.1
Misdemeanor	3,200	26.6
Felony	8,216	68.3

*Note: 152 cases with age at first offense between eight and 11 years were omitted.*

Four program types were represented, with just over two-thirds (68.6%) receiving Youth Development Center (YDC) treatment. This program type is the most classically punitive type, involving custodial placements of juveniles. The next largest portion (11.7%) received wilderness treatment, with just a slightly

smaller portion (11.3%) receiving Behavior Management through Adventure (BMtA) treatment. The smallest portion (8.6%) received specialized treatment. Wilderness programs were characterized by placements in long-term wilderness adventure therapy. BMtA programs were driven by character development and included group activities aimed at developing the youths' self-esteem, teamwork, and problem solving skills. Specialized programs serviced youths with specific needs, such as substance abuse treatment or mental health treatment. A breakdown of the distribution of misdemeanor, felony and status offenses represented 26.6%, 68.3%, and 5.1% of the sample, respectively.

### Results

In *Table 2*, recidivism rates are higher for black juveniles and male juveniles, when compared with white juveniles and female juveniles. Female youths had a recidivism rate of 30.4% after three years, substantially less than the male recidivism rate of 50.1%. Recidivism rates after three years were higher for black offenders, with black female recidivism measuring 33.6%, and black male recidivism measuring 53.7%. These are higher than the white recidivism rates of 25.9% and 42.8%, respectively. Female and male recidivism rates were significantly different among the racial groups ( $\chi^2 = 9.92$ ,  $df = 2$ ,  $p < 0.01$  for females;  $\chi^2 = 115.06$ ,  $df = 2$ ,  $p < 0.001$  for males).

**Table 2** Recidivism within three years of release (in %) by race by gender

	Recidivism	White	Black	Other	Total
Female	No	413 (74.1)	475 (66.4)	15 (60.0)	903 (69.6)
	Yes	144 (25.9)	240 (33.6)	10 (40.0)	394 (30.4)
	Total	557 (100.0)	715 (100.0)	25 (100.0)	1,297 (100.0)
Male	No	1,944 (57.2)	3,303 (46.3)	113 (57.9)	5360 (49.9)
	Yes	1,455 (42.8)	3,836 (53.7)	82 (42.1)	5373 (50.1)
	Total	3,399 (100.0)	7,139 (100.0)	195 (100.0)	10,733 (100)

For females:  $\chi^2 = 9.92$ ,  $df = 2$ ,  $p < 0.01$ . For males:  $\chi^2 = 115.06$ ,  $df = 2$ ,  $p < 0.001$ .

In order to test Hypotheses three and four, a logistic regression analysis was used. By controlling for age at first offense, length of stay in placement, type of program, and most serious offense classification, it is possible to better understand the effects that gender and race have on recidivism rates. In *Table 3*, male juvenile offenders are 2.4 times more likely to recidivate within three years following release than female offenders ( $\chi^2 = 645.80$ ,  $p = .00$ ). Additionally, with an odds ratio of .66 ( $B = -.42$ ,  $p = .00$ ), white youths were significantly less likely to recidivate than black youths, which served as a reference group in this table. Juveniles in the racial group "other" were also less likely to recidivate than black

youths, with an odds ratio of .69 ( $b = -.38, p = .01$ ). Seemingly misaligned with Mbuba (2005) and Yan (2009), race is a significant factor in predicting recidivism. This is likely due to the dataset being used in this analysis lacking certain variables that previous research has found to be a more direct influence on recidivism, such as socio economic status, geographic location of residence, and living situation.

**Table 3** Logistic regression of recidivism within three years following release (N=11,878)

	b	S.E.	Wald	p	Exp (B)
Gender (1 = boys)	0.86	0.07	165.03	0.00	2.36
Race (ref. = black)					
White	-0.42	0.04	101.90	0.00	0.66
Other	-0.38	0.14	6.99	0.01	0.69
Age at first offense	-0.26	0.02	274.50	0.00	0.77
Length of stay in placement	0.00	0.00	0.68	0.41	1.00
Program types (ref. = BMtA)					
Wilderness program	0.45	0.08	30.04	0.00	1.57
Specialized program	0.22	0.09	5.84	0.02	1.24
YDC program	0.41	0.07	34.87	0.00	1.50
Most serious offense	-0.20	0.04	32.12	0.00	0.82
Constant	3.12	0.24	166.91	0.00	22.74

$\chi^2 = 645.80, df = 9, p < .001, -2 \text{ Log likelihood} = 16,010.87$

The variables of most serious offense, age at first offense, length of stay, and program type contributed to interesting trends during this stage. First, most serious offense classification (coded 0 = status, 1 = misdemeanor, and 2 = felony) showed a negative correlation between offense severity and likelihood of recidivism. In *Table 3*, the odds ratio for the most serious offense classification is .82 ( $b = -.20, p = .00$ ). This means that with each level of severity gained, the juvenile was .82 times less likely to recidivate than a juvenile who was charged with an offense of lesser severity. Second, age at first offense showed a trend of a decreasing likelihood of recidivism with each additional year of age, with an odds ratio of .77 ( $b = -.26, p = .00$ ). This shows that with each additional year of age before committing a first offense, juveniles were .77 times less likely to recidivate than juveniles of a younger age. Third, length of stay in placement did not have a significant effect ( $b = .00, p = .41$ ). Fourth, wilderness, specialized, and YDC programs all showed higher levels of recidivism rates than the reference BMtA group, with odds ratios of 1.57, 1.24, and 1.50, respectively ( $b = .45, p = .00; b$

= .22,  $p = .02$ ;  $b = .41$ ,  $p = .00$ ). The overall model fit the data well ( $\chi^2 = 645.80$ ,  $p = .00$ ).

**Table 4** Logistic regression of recidivism within three years following release by gender (N = 11,878)

	Male		Female	
	b	Exp (B)	b	Exp (B)
Race (ref. = black)				
white	-0.43	.65**	-0.35	.71**
other	-0.45	.64**	0.30	1.35
Age at first offense	-0.26	.78**	-0.32	.73**
Length of stay in placement	0.00	1.00	0.00	1.00**
Program types (ref. = BMtA)				
Wilderness program	0.46	1.58**	1.43	4.16**
Specialized program	0.24	1.27*	0.23	1.26
YDC program	0.42	1.52**	0.47	1.59*
Most serious offense	-0.21	.81**	-0.08	0.92
Constant	3.87	47.77**	4.01	55.05**

For male:  $\chi^2 = 417.43$ , -2 Log likelihood = 14,461.65

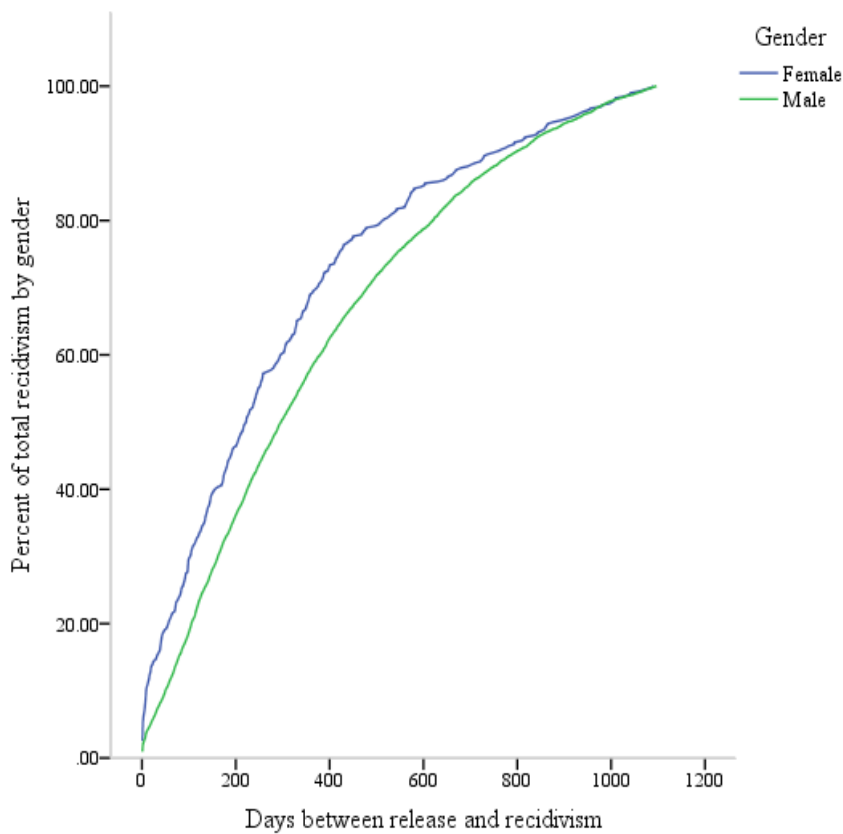
For female:  $\chi^2 = 67.34$ , -2 Log likelihood = 1,525.46

\*\* $p < .01$ ; \* $p < .05$ ;

In order to better understand how those recidivism rates differ between male and female offenders, a logistic regression was performed by gender. In *Table 4*, white juveniles had an odds ratio of .65 for males ( $b = -.43$ ,  $p = .00$ ), and .71 for females ( $b = -.35$ ,  $p = .01$ ), meaning that white male youths were .65 times less likely to recidivate than black males, and white female youths were .71 times less likely to recidivate than black females. Male youths classified by race as "other" were .64 times less likely to recidivate than black males ( $b = -.45$ ,  $p = .00$ ), and other female juveniles were 1.35 times more likely to recidivate than black females, but this finding was not significant ( $b = .30$ ,  $p = .48$ ). Age at first offense had an odds ratio of .78 for males ( $b = -.25$ ,  $p = .00$ ) and .73 for females ( $b = -.32$ ,  $p = .00$ ). This means that for each additional year of age that a juvenile committed his/her first offense, it was .78 times less likely for the males to recidivate and .73 times less likely for females. Length of stay in placement remained a non-effect with an odds ratio of 1.00 for both genders ( $b = .00$ ,  $p = .07$  for males;  $b = -.00$ ,  $p = .00$  for females).

Wilderness programs had an odds ratio of 1.58 for males ( $B = .46$ ,  $p = .00$ ), and 4.16 for females ( $b = 1.43$ ,  $p = .01$ ). Males who attended a wilderness program were 1.58 times more likely to recidivate than males who attended a

BMtA program, and female wilderness attendees were 4.16 times more likely to recidivate than those that attended BMtA programs. Males who attended specialized programs were 1.27 times more likely to recidivate than males who attended BMtA programs ( $b = .24, p = .02$ ). The effect of specialized programs was found to be not significant for females, with an odds ratio of 1.26 ( $b = .23, p = .27$ ). YDC programs had an odds ratio of 1.52 for males ( $B = .42, p = .00$ ) and 1.59 for females ( $b = .47, p = .01$ ). Males who attended YDCs were 1.52 times more likely to recidivate than males who attended BMtA programs, and females who attended YDCs were 1.59 times more likely to recidivate than females who attended BMtA programs.



**Figure 1** Percent of total recidivism by days between release and recidivism by gender

Most serious offense classification had an odds ratio of .81 for males ( $b = -.21, p = .00$ ). It was found to be not significant for females, with an odds ratio of .92 ( $b = -.08, p = .41$ ). With each level of increasing severity of most serious

offense, males were .81 times less likely to recidivate. One conclusion that can be drawn is that regardless of gender or race, likelihood of recidivism within three years of release is higher for juveniles that were subject to a wilderness, specialized, or YDC program compared to those juveniles who attended BMtA programs, which served as a reference group for this table. Both the male and female models fit the data well ( $\chi^2 = 417.43, p = .00$ ;  $\chi^2 = 67.34, p = .00$ , respectively).

One interesting trend found in the data pertains to the time between release and recidivism. While a higher proportion of male offenders recidivated overall, it was found that the time between release and recidivism was shorter for females than males. In *Figure 1*, it is shown that at nearly every point in time leading up to the three-year mark following release, a higher percentage of the total of each gender that would eventually recidivate was female. In other words, female juveniles were found to recidivate more quickly than male juvenile offenders.

### **Discussion**

One of the consistent findings in the study was the higher recidivism rates for males and black juveniles. These results consist with previous research and our hypotheses. According to past research, the relationship between race and recidivism would be lessened or extinguished altogether if the other variables were controlled for, as found by Mbuba (2005) and Yan (2009). However, after controlling for other possible causal factors, such as age at first offense, length of stay in placement, program type, and offense classification, the relationships remained strong. Because of this, the current study is unable to accurately determine the causation of this trend. It is likely that the dataset lacked important demographic and personal variables found in the Mbuba (2005) and Yan (2009) studies that negated the race effect on recidivism. It is more likely that race-related hardships are responsible for the higher rates of recidivism for black youths. The factors outlining such hardships were not present in the current dataset.

One of the most interesting findings was the lesser amount of time between release and recidivism for females compared with males. The reason for this is not known, but it is reasonable to believe that it may be a result of societal expectations. For example, due to lower community expectations for troubled male youths (in comparison with female youths), a male offender may not find himself in a position where he is strictly supervised upon being released. On the contrary, female offenders are much rarer, and therefore it may seem much more pertinent that these female offenders are watched closely upon release. Under these circumstances, reoffending by females will be brought to the attention of the authorities sooner rather than later. Further research and analysis is needed before causation can be assigned to this trend. It should be noted that the female sample

for this study was much smaller than the male sample, accounting for just under 11% of the total sample.

The decreased likelihood of recidivism for juveniles that committed more serious offenses was another extraordinary finding. It is against common thinking to find that juveniles that committed felonies had a lower likelihood of recidivism than those juveniles whose most serious offense was a simple status offense. The cause of this trend is unknown, but it may be linked to a progression of offending, in which juveniles commit smaller offenses early in their delinquent tendencies, and progress into more serious offenses as they move through life. This would mean that juveniles who are caught for status offenses or misdemeanors are more likely to be just starting their offending careers, instead of felony offenders, who would be more likely to be at the end of a delinquent career, and thus less likely to reoffend.

The data confirms that out of the four types of dispositions handed down to juveniles from 1989-2003 in Georgia, BMtA, a program based on therapeutic character development, showed to be the lowest risk for increased chances of reoffending. The disposition the highest correlated with increased recidivism is the wilderness programs. This may be due to the fact that wilderness programs, by definition, isolate youths and take them away from all of the positive influences in their lives, as cautioned by Austin et al. (2005). It stands to reason that, while wilderness programs may facilitate internal growth of the juveniles and may give delinquent youths a scenario in which they can work on bettering themselves, this progress cannot become permanent when arrived at in the vacuum of the wilderness setting. Youths need to be able to establish healthy feelings and behaviors in the context of the lives to which they will be returning at the commencement of their placements.

Another consistent finding was that YDC programs, characterized by punitive, custodial measures, were associated with higher risk of reoffending. This is perfectly in tune with the past research on the subject, which found that harsh, punitive sanctions tend to alienate and stifle the development of troubled juveniles. It can be seen that control-oriented dispositions do not work for reducing reoffending. These types of placements do not necessarily address the root causes of delinquency, and instead work to punish and incapacitate youths, which does little or nothing to correct or diminish their initial motives. Specialized programs were associated with increased risk for reoffending compared with BMtA. Perhaps certain types of specialized programs, if applied to the right child at the right time, as prescribed by Howell et al. (2014), can be effective in reducing reoffending. Juveniles who received specialized treatment may be at higher risk for recidivism, because the juveniles subjected to specialized dispositions are those youths which are more likely to have trouble

during the rehabilitation process due to mental health conditions or substance abuse issues.

BMtA, when serving as reference group for the remaining three program types, proved to be the most beneficial and effective in reducing the risk of reoffending. This is in line with past research, which almost exclusively favors rehabilitation, therapy, and treatment of underlying issues for reducing recidivism. The BMtA programs in Georgia utilized group activities and challenge-based exercises in order to spur higher levels of self-esteem, team work, and problem solving within troubled youths. Naturally, these efforts, if successful, would be effective in giving at-risk juveniles the necessary skills and demeanor for making better decisions, whether it be to diffuse violent situations, or to cope with the stressors of life. Equipping troubled youths with these skills sets them up for a more promising outcome than programs which can realistically only punish and alienate, such as YDC dispositions.

### **Conclusion**

Future research should aim to test the reasons for the correlations found in this study, like those studies that did so for race (Mbuba 2005; Yan, 2009). It is important to hold constant things such as treatment/disposition and socio economic status when viewing the effects of race and gender on recidivism so that it can be seen clearly whether or not the predicting factors being measured are indeed significantly related. This is necessary in order to form conclusions that address causation. Additional research should focus on the gender relationship with time between release and recidivism. This will help determine the generalizability of the trend seen in the current study. The current study's findings concerning program type were simply a replication of previous research, but the finding that juveniles respond better to therapy-focused treatment should not be trivialized. This finding holds the greatest potential and implication for effective application of treatment. Practitioners and policymakers should continue to strive for more rehabilitative sanctions for youthful offenders.

The current study found relationships that are well documented, such as the correlation between male and black juveniles and higher levels of recidivism, and the higher risk of recidivism for juveniles who received punitive, custodial sanctions. It also uncovered less observed trends, such as the shortened period of time between release and recidivism for female offenders. Both serve to better complete the mounting compilation of evidence concerning juvenile recidivism. In this largely unregulated subject, studies such as the present analysis are critical in forming a broader and more thorough understanding. Treatment of juvenile offenders is an important issue, and knowing how to formulate effective programming is essential. Research must address the question of why these relationships exist, and what do they imply for future policy development. Only



by doing so can legislation begins to focus on the possible channels for alleviating recidivism rates for delinquent youths.

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