
Examining the Gendered Effects of Intensive Supervision Programs on Juvenile Probation Outcomes



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Abstract

This study evaluated gender and the effect of intensive supervision programs (ISPs) on juvenile probation outcomes. Logistic regression and propensity score matching analysis was conducted using a sample of 10,478 juvenile probationers supervised by a large juvenile probation agency located in a Southwestern state between 2010 and 2013. Results of propensity score matching analyses suggested that being in the intensive supervision program increased the likelihood of boy and girl probationers being found to have violated probation and being found to have committed a new offense. Results also showed that the criminogenic effect of intensive supervision programs on probation outcomes was stronger for boys than girls. Policy and theoretical implications are discussed.

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Introduction

Probation is the most commonly used means of disposing of adjudicated cases in the juvenile justice system. In 2010, 53 percent of the adjudicated juvenile cases were ordered to probation (Office of Juvenile Justice and Delinquency Prevention, n.d.). Probation is used as a mechanism for diverting medium to high-risk youth from incarceration. While under supervision, juveniles on probation are permitted to reside in their community where they can attend school, work, and maintain preexisting social ties.

Throughout their supervision term, juvenile probationers are responsible for complying with many court-ordered conditions that could include curfew, school attendance, community service, restitution, drug testing, and participation in rehabilitative programming. A youth's compliance with probation conditions is regularly monitored by probation officers through school records, home visits, and regular meetings with probationers. In the case that it is discovered that probationers are not complying with their conditions of probation, the probation officer can request that the youth's probation be revoked by providing documentation of noncompliance to the court. Additionally, probation can be revoked in the instance that a probationer is found to have engaged in a new delinquent act.

The courts seek to accomplish two goals in its use of probation. First, probation seeks to reduce the loss of resources that would otherwise be higher if out-of-home placements are used (Barton & Butts, 1990). Second, probation is viewed as a means to reduce recidivism by minimizing the disruption to juveniles' community ties that is caused by more restrictive sanctions like out-of-home placements. In essence, probation is an attempt to divert youth from placement in facilities outside of the home. Evidence indicates that probation reduces disruption to juveniles' lives and reduces the costs incurred to local, state, and federal agencies. (Barton & Butts, 1990). Yet, research has found that community-based dispositions like probation have mixed effects on juvenile outcomes (Ryan, Abrams, & Huang, 2014).

Few studies have explored the effect that probation itself has on crime (Taxman, 2002). Among the available studies, results indicate that probation's effect on recidivism is not positive. One such iteration of probation that is regularly used to dispose of juvenile cases of delinquency is the ISP. Previous research has found that being supervised under ISPs frequently increases the likelihood that offenders will recidivate. It has also found that ISPs that emphasize harsh discipline and intense monitoring increases recidivism. However, few studies have examined the comparative effect of probation and ISP on juvenile outcomes. Moreover, very little

has been explored regarding whether ISP affects supervision outcomes of boy and girl juveniles similarly.

The current study fills this gap in the literature by comparing the effects of ISPs to the effects of probation on outcomes for boys and girls. Findings from this study can help to further specify different levels of supervision effects on juvenile outcomes and thus determine if ISPs are effectively appropriate interventions for offenders of both gender groups.

Predictors of Probation Outcomes

Technical violations are noncriminal behaviors committed by youth that violate conditions set forth by the courts such as failure to attend school, failure to report for scheduled office visits, testing positive for drug tests, or missing curfew (Campbell, 2016). Studies on predictors of technical violations of probation have been rare. Most of the studies on predictors of technical violation have used adult samples. Furthermore, even fewer studies have examined gender as a predictor of technical violations, regardless of whether the sample studied contained adult or juvenile probationers. Among existing studies, age, socioeconomic status, prior criminal record, education, marital status, race, prior probation noncompliance, frequent job changes, substance use, living arrangements, prior incarceration, family criminality, offense history, and seriousness of offense have emerged as significant predictors of technical violations (Gray, Fields, & Maxwell, 2001; Morgan, 1993; NeMoyer et al., 2014, Schulenberg, 2007). Moreover, Olson and Lurigio (2000) found that the intensity of supervision contributes to a higher likelihood that probation officers will uncover technical violations.

Additionally, some evidence suggests that probation officer bias may impact the probation outcomes for youth. For instance, Gaarder, Rodriguez, and Zatz (2004) found that juvenile probation officers and other juvenile justice practitioners expressed deep-seated gender and racial stereotypes of the youth they supervised. Specifically, girls on probation were viewed as manipulative, melodramatic, and prone to commit technical violations.

Evidence regarding the factors that place juveniles at risk for committing new law offenses have been mixed. Yet, the majority of juvenile studies on reoffending point to several demographic, education, and offense factors that are positively associated with recidivism. Studies show that early age at first referral and having a status offense as a first referral (Barrett, Katsiyannis, & Zhang, 2010) is predictive of recidivism. Further, in a seminal meta-analysis, Cottle, Lee, and Heilburn (2001) found that predictors of criminal recidivism among juveniles include: gender (male),

low socioeconomic status, early age at first contact with law, early age at first commitment, number of prior arrests, number of prior commitments, severity of first crime, length of first incarceration, victim of abuse, single parent, number of out-of-home placements, delinquent peers, family problems, history of special education, standardized achievement score, verbal IQ score, full scale IQ score, substance abuse, conduct problems, and nonsevere pathology. The aforementioned studies, however, did not distinguish the risk factors for obtaining new law offenses between boys and girls. One exception is a study by Thompson and Morris (2013) which found that academic achievement was not predictive of recidivism for girls, but academic achievement was predictive of recidivism for boys. Yet, all other factors were consistently predictive of recidivism for boys and girls.

Intensive Supervision Programs

ISPs began to emerge in the 1980s (Lowencamp et al., 2010). The programs gained popularity during this time period because they represented a more cost-effective sanction for serious offenders than out-of-home commitments and closely approximated more punitive policies, making ISPs more comparable to incarceration than probation programs. Today, ISPs are the most commonly used sanction used by the courts to dispose of adjudicated youth classified as moderate to high-risk (Caputo, 2004). The programs differ from probation programs in several aspects. For example, ISPs are characterized by smaller caseloads. Smaller caseloads allow probation officers working in ISPs to build a better rapport with probationers and have more frequent and higher-quality contacts with probationers than probation programs (Petersilia & Turner, 1993; Tonry, 1996). In addition to smaller caseloads, ISPs require more stringent enforcement of probation rules, such as random and unannounced drug testing, weekly face-to-face contact with probation officers, completion of community service hours, and participation in treatment programs (Petersilia & Turner, 1993).

Most studies examining the effect of ISPs have shown that ISPs are ineffective in reducing the likelihood that offenders obtain a new law offense when they emphasize deterrence, control, and surveillance (Barnes et al., 2010; Drake, Aos, & Miller, 2009; Lipsey, 2009; MacKenzie & Farrington, 2015). However, evidence also suggests ISPs that employ a therapeutic and compassionate approach to supervision are more effective at curbing recidivism than control-oriented ISPs (Drake et al., 2009). Previous research also indicates ISPs that integrate evidence-based practices are also more equipped to reduce recidivism than ISPs that do not (Jalbert et al., 2010).

Gender and Juvenile Justice Practitioners

While the literature has explored the effect of ISPs on juvenile outcomes, what has been left to discover is gendered effects on juvenile outcomes. Gender remains one of the most reliable predictors of delinquency. Girls offend at lower rates than boys in most serious offense categories, yet offend at more similar rates for less serious offenses like shoplifting, marijuana use, drug use, and status offending (i.e., a noncriminal act that is considered a law violation only because of a youth's status; Belknap, 2015). Even with this being the case, research has shown that girls' progression through the juvenile justice system differs greatly from that of boys. Girls primarily enter the justice system due to behaviors related to their sexuality and other acts of immorality (Pasko, 2010). Once in the system, girls on probation are more likely than boys to be incarcerated due to committing status offenses (Davis, 2017).

Many scholars have attributed this disparate processing in girls' delinquent cases to patriarchal attitudes held by juvenile justice practitioners (Chesney-Lind, 1973; Chesney-Lind, 1981; Chesney-Lind, 1987; Chesney-Lind and Shelden, 2014). In short, these scholars argue that juvenile practitioners respond to girl delinquency more harshly than boy delinquency due to stereotypes regarding the social expectations of girls. Findings produced in these studies conclude that girls are frequently viewed as manipulative, sexualized, and emotional (Baines & Alder, 1996; Bond-Maupin, Maupin, & Leisenring, 2008; Gaardner, Rodriguez, & Zatz, 2004) but still in need of protection. As a result, juvenile justice practitioners hold punitive attitudes towards girl delinquency in some cases and less punitive attitudes towards girls in other cases.

The current study elaborates on prior ISP research by examining effects on probation outcomes for boys and girls that extend beyond new law offenses. Specifically, technical violations are analyzed, which is a natural consideration given the emphasis on surveillance and control in ISPs. This study, in summary, tests three connected research questions about the effects of juvenile ISPs:

1. Do ISPs increase the likelihood of obtaining a technical violation for boys and girls?
2. Do ISPs increase the likelihood of being found to have committed a new offense for boys and girls?
3. Do ISPs have the same effect as probation on the likelihood of obtaining a technical violation or a new offense for boys and girls?

Method

The current study examined the counterfactual question: “How likely would boy and girl probationers supervised in ISPs obtain a technical violation or new law offenses if they had been placed on regular probation instead?” using propensity matching, a quasi-experimental statistical technique that estimates the effect of an intervention through the use of covariates. The accuracy of the estimated effect of treatment (ATT) is based on limiting the effects of unobserved covariates.

Therefore, it is important to emphasize that a sufficient number of theoretically and empirically important covariates of reoffending and violating probation be included in the construction of the propensity scores and that the effect of unobserved covariates be limited, though they cannot be eliminated. Rosenbaum and Rubin (1983) suggest using a minimum of 10 covariates in the construction of the propensity score.

Data Collection

Data for the current study were provided by a large juvenile probation agency in a southwestern state. The ISP under study supervised adjudicated youth following their court appearance. The presiding judge issued a disposition of probation and specified that the designated youth be supervised by the ISP. If they complied with rules of probation, youth in the ISP were supervised for 3–5 months before being transferred to a regular probation unit where they completed their remaining probation term. During their first month under ISP supervision, youth were required to make face-to-face contact twice a week with their supervising officer. If deemed compliant, their face-to-face contact was reduced to once a week and three times a month during their second and third months respectively. Youth in the ISP were drug tested monthly if their court order or a screening assessment mandated random testing. Drug testing could also be required if the youth’s parent(s) or supervising officer suspected drug use. Youth were also frequently monitored for compliance with curfew and school attendance through unannounced curfew checks and school records.

In addition to the ISP outlined above, the agency operated other ISPs for girls that included gang, drug, aftercare, and mental health programs. These ISPs contained programming for their distinct and unique populations served, while also boasting of frequent contact between youths and their probation officers. However, the ISP differed from the other ISPs for girls in that it transferred youth who complied with the supervision conditions for 3–4 months to probation units, where they then finished their probation term. The ISP employed evidence-based programs (EBP) used in rehabilitating youth, including but not limited to:

motivational interviewing, cognitive-based therapy, mentoring, and multisystemic therapy (MST; Lipsey, 2009). There was limited knowledge regarding the availability of evidence-based programming for all youth in the agency or how the said programming was implemented.

Probation officers, intake officers, and treatment vendors collected and recorded data on youths processing through the juvenile system through an electronic case management system. Data collected and recorded included: youths' demographic and background characteristics, legal factors related to disposition, secure detention, scoring summary for mental health assessment tools, outcome of mental health and substance use disorder services offered, program information, and supervision information.

Sample

The sample consisted of all adjudicated youths who received dispositions of court ordered probation for a term of 12 months between 2010 and 2013. The 12-month probationary term was chosen because agency research personnel reported that most adjudicated youth placed on probation were supervised for that length of time. Data were requested and granted only for probationers of both genders who received probation and were placed in the ISP as dispositions following their adjudication in their respective court. Girl probationers that were in the agency's specialized female programs, or other specialty programs, were not included in the study because they received population-specific programming and curriculum.

Measures

Independent Variables

Because propensity score matching requires that the covariates used be theoretically or empirically associated with the likelihood of receiving treatment, the current study used factors that were previously found to be associated with recidivism to compute propensity scores (Cottle et. al, 2001; Rosenbaum & Rubin, 1983).

The data for the study contained dummy variables for race (Black, Asian, Hispanic, White, and other), with other race probationers omitted as the reference variable. Female was dummy coded (Female = 1, Male = 0). Other demographic variables included questions about the juveniles' background, such as whether they were in special education (No = 0, Yes = 1); had mental health needs (No = 0, Yes = 1); were affiliated with gangs (No = 0, Yes = 1); or experienced physical abuse (No = 0, Yes = 1), sexual abuse (No = 0, Yes = 1), or emotional abuse (No = 0, Yes = 1). The

study also incorporated variables that described whether either of the youth's parents had been or were incarcerated (No = 0, Yes = 1).

Additionally, the data contained other important risk factors for youth. School information describing the grade the youth reported he or she was enrolled in at the time of his or her arrest (grade 0 to 12) and the number of prior offenses (0–17) were included as a continuous variable. There was also a variable for whether a youth had received a determinate sentence (No = 0, Yes = 1) or had a history of placement in a secure facility (No = 0, Yes = 1). Data also contained information regarding the seriousness of the youth's highest offense at the time of arrest (Misdemeanor = 0, Felony = 1), the seriousness of the youth's first referral to the courts (Misdemeanor = 0, Felony = 1), the number of detention events youth had (0–3), and the number of hours youth stayed in detention (0–325). A dummy variable was created for youth in the ISP (Probationers = 0, ISP Probationers = 1).

Dependent Variables

The study included two outcomes. Dummy variables were generated for “violation of probation” and “new offense” to answer research questions regarding the likelihood of youths violating probation or obtaining a new violation. This designation of offenders who violated probation or obtained a new law violation during the 12 months of supervision was provided by the agency's research division personnel.

Data Analysis

The current study used propensity score matching for the purpose of reducing bias in the estimation of the treatment effect when the outcome is known. First used by Rosenbaum and Rubin (1983), propensity score matching is defined as a “balancing score” that reduces the bias created by confounding covariates. Unlike traditional matching, the use of propensity scores matches cases on one dimension (i.e., the propensity score) that is calculated using multiple covariates associated with specified outcomes. In line with this approach, the current study uses covariates that have been found to be associated with new law offenses and probation violations to create the propensity score. This is advantageous because of the difficulty involved in finding identical or close matches on all of the covariates (Stuart, 2010).

The process for using propensity scores involves four steps. First, propensity scores are calculated for each case, describing the case's propensity to receive treatment. Second, each case in the treatment group is matched with a case in the control group based on the propensity score, and then the researcher determines the matching qualifications. Third, the quality of the matched samples is assessed

until well-matched samples are produced. To finish, the matched samples can then be used to assess the effect of the treatment on the outcome of interest with certainty that the samples are comparable. It is important to note that the use of propensity scores does not preclude the use of multivariate or regression techniques. It is suggested that the two methods are complementary and best used in tandem (Rosenbaum & Rubin, 1983; Stuart, 2010).

All data analysis for the study was computed using Stata data analysis software. First, the data were disaggregated into a girl and boy sample. Second, the “PSMATCH2” command was used to compute propensity scores for each probationer. Then nearest neighbor 1:1 matching without replacement (caliper .001), was used to match youth being supervised in an ISP with probation youth. Nearest neighbor matching only matches the treatment group cases to similar control group cases, thus, the number of matches was limited to the number of youth in the ISP. Youth who made several court appearances for multiple new law offenses or violations between 2010 and 2013 were only counted for their first probation term.

The quality of matching was then assessed using diagnostic statistics provided by the “pstest” and “psgraph” commands. Specifically, means of difference tests were used to determine if there was a significant difference between treated and control groups after matching ($p = .001$). Additionally, a visual inspection of the overlap of the treatment and control groups on support was conducted to ensure that groups were at similar risks of reoffending and being placed in the ISP.

The diagnostics produced the following propensity score matching and provide explicit assurance that control and treatment groups are similar with regards to observable and unobservable characteristics. Propensity score matching is particularly useful in criminological research due to the discipline’s emphasis on EBP. Study designs in criminology research involve predetermined control and treatment groups and are, consequently, limited due to ethical dilemmas regarding the selection of treatment groups. Propensity score matching, while not a perfect solution, attempts to account for this problem by creating a quasi-experimental scenario.

Results

Descriptive Statistics

Table 1 shows the pre-matching characteristics of the boys and girls being supervised in ISPs and probation between 2010 and 2013. Roughly 21 percent of

the sample was girls. The majority of the girl sample was Black (44.2 percent), followed by Latino (41.3 percent). The opposite was true for the boy sample, with the majority of the sample being Latino (46.1 percent), followed by Black (44.1 percent). The average probationer's reported educational grade level at the time of arrest was 9.7 for girls and 9.6 for boys. Boys (35.1 percent) more frequently appeared in the court for felony offenses than girls (20 percent). On average, boys and girls had a similar number of previous detention events (0.69). However, on average, boys (11.7) spent more hours in detention than girls (11.1). Boys (1.8 percent) had a higher number of previous offenses than girls (1.4 percent). Additionally, a higher percentage of boys (34.1 percent) had been first referred to the juvenile justice system for felony offenses than girls (22.3 percent).

In terms of additional characteristics, more boys (5.8 percent) than girls (2.8 percent) were in special education classes. But similar to previous literature reviewed, girls (68.8 percent) were more likely to experience mental health problems than boys (51.3 percent). Boys (23.6 percent) were documented as being involved in gangs more frequently than girls (9.4 percent). In terms of abuse, girls were more likely to be victims of physical abuse (4.7 percent), sexual abuse (8.6 percent), and emotional abuse (1.6 percent) than boys. More girls (8.4 percent) in the sample had parents who were incarcerated than boys (7 percent). Still, boys appeared to receive harsher treatment from courts than girls. Twenty-eight percent of the boys in the sample had, at one time or another, been in a placement facility, while roughly 23 percent of the girls had been in a placement facility. Boys (1.3 percent) more frequently received a disposition of determinate sentencing than girls (0.2 percent). Likewise, more boys (23.3 percent) had been placed in an ISP than girls (8 percent).

In terms of the outcome variables, boys and girls had different outcomes. A higher percentage of boys (23.6 percent) committed a new offense than girls (13.1 percent) while being supervised. However, the relationship between gender and violation of probation appeared to be negatively associated. A higher percentage of girls (24.7 percent) obtained violations of probation than boys (17.9 percent). This finding supports previous findings regarding girls' greater propensity for being sanctioned for status offenses (Puzzanchera, Adams, & Hockenberry, 2012).

Propensity Score Matching

To prepare for analysis, the data were disaggregated into boy and girl samples. Then the "psmatch2" command was used to complete propensity score matching. Following the computation of propensity score matching and analysis of treatment effects, diagnostic statistics for each sample were generated and inspected using the "pstest" command in Stata. Table 2 shows the estimated average treatment

effect of ISP on the two dependent variables—violation of probation and new offense. Table 3 shows balancing statistics for the treated and control groups on each covariate used to compute propensity scores.

Table 2 explores whether being in an ISP increased or decreased the probability of violating probation and committing a new offense for boys and girls. The examination of the aforementioned outcomes was readily possible because nearest neighbor matching computes the difference between the outcome of the treated cases and the outcome of the matched control cases. The estimated average treatment was then obtained by averaging those differences. Results of the research questions are as follows:

Research Question 1: Do ISPs increase the likelihood of obtaining a technical violation for boys and girls?

According to the results illustrated in table 2, ISP increased the probability of obtaining a technical violation by .17 on average for boys and .16 on average for girls. These results are consistent with those of other studies (Hyatt & Barnes, 2014; Paparozzi & Genendreau, 2005). The findings suggest that frequent contact with probation officers and intensified supervision of youths being monitored in ISP increases the likelihood that violation of technical rules will be detected. Yet, the findings refute Jalbert and colleagues' (2010) assertion that ISP could reduce technical violations for boys and girls, though it is unclear whether the agency under analysis fully implements evidenced-based practices as recommended.

Research Question 2: Do ISPs increase the likelihood of committing a new offense for boys and girls?

ISP increased the probability of committing a new offense by .16 on average for boys and .13 on average for girls. These results matched those of earlier studies (Drake et al., 2009; Gendreau et al., 2000; Farrington & Welsh, 2005; Petersilia & Turner, 1993). ISP appeared to increase the likelihood of recidivism. In contrast to other findings, however, ISP did not have negligible effects on recidivism (Lipsey, 2009) or the effect of reducing recidivism (Drake et al., 2009; Jalbert et al., 2010). The increased likelihood of ISP probationers being found to have committed a new offense might be averted by ensuring that the rehabilitative function of supervising youths be given equal attention as the control and supervision functions. While rehabilitative programs like MST, Functional Family Therapy, and motivational interviewing were used in the ISP studied, it is unclear whether availability and implementation of these EBPs were in line with recommended best practices.

Research Question 3: Do ISPs have the same effect as probation on the likelihood of obtaining a technical violation or obtaining a new offense for boys and girls?

The effect size of ISP on probation outcomes for girls was less pronounced than boys. Moreover, being in the ISP had its strongest effects on violation of probation outcome for boys followed by its effect on committing a new offense for boys. The third strongest effect the ISP had was on violation probation for girls, followed by its fourth strongest effect on girls' new offenses. The results of matching suggest that the ISP has a criminogenic effect on probation outcomes for probationers, with boys faring worse than girls in each category.

Diagnostic Statistics

A diagnostic test was conducted to assess the quality of matching. The balancing test was conducted to determine whether the treatment and control groups were effectively matched on the covariates included in the model (see table 3). The treated column contains the mean of the specified covariate for ISP youth, and the control column shows the mean of the specified covariate for probation youth. The percent bias column shows bias from selection effect and confounders present in each covariate after matching. Positive values in this column indicated that there was an increase in bias after matching, while negative values indicated that there was a decrease in bias after matching. The t column denotes the differences in means for the treated and control groups. Finally, the p column indicates whether the values of t were significant. Values greater than the alpha level (.01) indicated that the observed differences between the treated and control groups after matching were not significant.

Table 3 results confirmed that bias reduction was successful, as evidenced by all p values being more than the designated alpha level (.01). The only exceptions were the parent incarcerated, number of detention events, and placement variables in the boy sample. Additionally, it should be noted that girls had more variables (i.e., Asian, Mental health, Emotional abuse, and Determinate sentencing) in which matches could not be made than boys. This difference could be due to judges reserving ISP for higher-risk girls while more readily placing lower-risk boys in the ISP or a function of judges placing higher-risk girls in the Female Intervention Program (FIP). Failure to match ISP youth with probation youth could also be due to the small sample of girls in an ISP. Such a shortage of treated girls could create difficulty in matching on all important covariates. In either case, the findings indicate that ISP boys were much more similar to their probation counterparts than ISP girls.

Table 1: Descriptive statistics of independent and dependent variables, by gender

Variable	Female Sample		Male Sample	
	<i>f</i> or mean	% or σ	<i>f</i> or mean	% or σ
Race				
<i>Asian</i>	11	0.5	38	0.5
<i>Black</i>	973	44.2	3,402	41.1
<i>Latino</i>	910	41.3	3,815	46.1
<i>White</i>	306	13.9	1,007	12.2
<i>Other</i>	3	0.1	13	0.2
Grade	9.66	1.3	9.59	1.3
Special education	62	2.8	482	5.8
Mental health	1,516	68.8	4,244	51.3
Gang	208	9.4	1,954	23.6
Physical abuse	103	4.7	159	1.9
Sexual abuse	190	8.6	107	1.3
Emotional abuse	36	1.6	57	0.7
Parent incarcerated	185	8.4	575	7.0
Current referral felony	440	20.0	2,902	35.1
Determinate sentencing	5	0.2	110	1.3
# Detention events	0.69	0.5	0.69	0.5
# Detention hours	11.09	17.2	11.72	24.5
# Prior offenses	2.14	1.4	2.64	1.8
First referral felony	492	22.3	2,823	34.1
Placement	507	23.0	2,320	28.0
Intensive supervision	177	8.0	1,926	23.3
Violation of probation	545	24.7	1,478	17.9
New offense	289	13.1	1,956	23.6
N = 10,478	2,203	21.0	8,275	79.0

Note: *f* = frequency; σ = standard deviation

Table 2: Estimated Average Treatment (ATT) of ISP on probation outcomes*

	Treated	Controls	Difference	S.E.	T-stat	% Off Support
<u>Male Sample</u>						
Violation of probation	0.300	0.131	0.169	0.014	12.350	43.010
New offense	0.371	0.209	0.162	0.015	10.800	43.090
<u>Female Sample</u>						
Violation of probation	0.369	0.214	0.155	0.040	3.870	81.360
New offense	0.226	0.095	0.131	0.034	3.860	82.920

*Compared to traditional probation using propensity score matching: 1:1 nearest neighbor without replacement (.001 caliper): male and female samples.

Table 3: ISP vs. traditional probation counterfactual: Post-matching balance statistics, samples by gender

Variable	Boy Sample					Girl Sample				
	Treated	Control	%B	t	p> t	Treated	Control	%B	t	p> t
Race										
Asian	0	0	-1.1	0.34	0.735	0	0	0	.	.
Black	0.44	0.43	2.30	0.22	0.82	0.48	0.37	21.00	1.13	0.26
Latino	0.47	0.50	-5.70	1.14	0.25	0.42	0.54	-24.30	-1.31	0.19
White	0.09	0.08	5.30	1.57	0.12	0.10	0.09	4.80	0.30	0.77
Grade	9.65	9.64	0.50	0.13	0.90	9.74	9.83	-6.40	-0.37	0.71
Special education	0.05	0.04	5.10	1.00	0.32	0.04	0.00	20.60	1.14	0.26
Mental health	0.52	0.55	-5.90	1.75	0.08	0.71	0.89	-38.60	-2.22	0.03
Gang	0.21	0.20	3.30	0.07	0.95	0.09	0.03	21.30	1.23	0.22
Physical abuse	0.02	0.01	4.40	1.39	0.16	0.01	0.00	7.40	0.65	0.52
Sexual abuse	0.01	0.00	2.80	1.03	0.30	0.04	0.00	17.40	1.24	0.22
Emotional abuse	0.01	0.00	2.80	0.51	0.61	0.00	0.00	.	.	.
Parent incarcerated	0.06	0.08	-6.00	2.05	0.04	0.09	0.11	-8.40	-0.56	0.58
Current referral felony	0.32	0.30	4.40	0.87	0.39	0.18	0.23	-11.10	-0.65	0.51

Determinate sentencing	0.01	0.01	-2.20	0.72	0.47	0.00	0.00	.	.	.
# Detention events	0.60	0.53	13.30	2.47	0.01	0.61	0.60	1.40	0.02	0.98
# Detention hours	8.68	7.05	7.10	1.80	0.07	5.81	3.57	16.20	1.19	0.23
# Prior offenses	2.54	2.52	1.60	0.21	0.83	2.15	2.40	-17.90	-1.12	0.26
First referral felony	0.31	0.28	7.20	1.80	0.07	0.20	0.17	6.10	0.37	0.71
Placement	0.13	0.08	13.00	4.48	0.00	0.05	0.00	14.10	1.32	0.19

Conclusion

The three research questions in this study sought to determine if ISP decreased the likelihood of obtaining a new offense and violating probation. Like previous studies, propensity score matching analysis showed that ISP was criminogenic; it decreased the likelihood of a successful probation outcome for boys and girls and increased the likelihood of being found to have committed a new offense and finding a violation of probation for boys and girls. A possible explanation for these results may be that the frequent monitoring and surveillance of youth in ISPs increases the chances that probation officers will detect probation violations. It may also be possible that youth in ISPs are at a higher risk for reoffending than youth in probation in spite of matching on several key covariates. In the agency studied, however, placement in probation versus ISP is left to the discretion of the judge as opposed to an objective formula. As a result, lower-risk youth could be adversely impacted by unnecessarily restrictive conditions innate to the ISP. The mere fact that probation and ISP youth could be matched shows that there is no identifiable rationale guiding which youth are placed in ISPs.

The third research question asked whether the effect of ISPs would be the same for boys and girls. Surprisingly, even though ISP was criminogenic for boys and girls, propensity score matching analysis revealed that its effects were more pronounced for boys than girls. As stated earlier, this finding may be caused by what is termed the chivalry hypothesis, a theoretical argument that females receive more lenient treatment than males by criminal justice personnel like judges, prosecutors, police and, in this case, probation officers (Pollock, 1999). Some studies support this theory, while others have found little support (Grabe et al., 2006). Others have argued the chivalry hypothesis is applicable for less serious female offenders and more serious female offenders are treated much more harshly than their male counterparts (Chesney-Lind, 1999). If ISP probation officers are averting violation of probations for girls under their supervision, this could explain the stronger effects of ISP on boys.

Another possible explanation for the weaker effects of ISP on girl probation outcomes could be that girls are at a lower risk for reoffending. The validity of this explanation, however, is unclear. Descriptive statistics in table 1 indicated that girls had higher instances of mental health problems; physical, sexual and emotional abuse; and parents incarcerated than boys. Although boys had more serious legal histories and involvement in delinquency than girls, logistic regression analysis results suggested that the strongest predictors of probation outcomes were mental health, gang affiliation, having a parent who was incarcerated, and being female. Thus, because girls suffered more frequently than males on all of the previously mentioned variables, with the exception of gang membership, ISP would have stronger effects on their probation outcomes than boys.

Another possible explanation for the finding that ISPs had stronger effects on boys' probation outcomes is the existence of gender-specific programming for girls. In particular, the FIP is a program designed to meet the unique needs of girls whose cases are disposed of in the courts. It may be possible that the higher-risk girls are placed in FIPs, thus skewing the results of the current study in favor of the girl sample. Whether this is the case can only be determined through further empirical analysis that includes the FIP.

Although this study focused on the effectiveness of ISPs in reducing recidivism and probation violations for boys and girls, the findings may well have a bearing on how probation is conducted. It appears that ISP produces more criminogenic effects on boys' and girls' probation outcomes than placement in probation. Therefore, these findings suggest several courses of action for restructuring ISPs. Greater efforts may be needed to assess and determine whether the philosophy guiding ISPs in agency is one of control, treatment, or a more balanced approach. A control philosophy may be exemplified by a compliance-driven approach to supervising youth. A treatment philosophy would be exemplified by frequent use of evidence-based practices and followup to ensure that programs are being implemented in line with the research. A balanced approach is a blend of the two said philosophies.

Another implication revolves around theoretical arguments undergirding the use of ISP as a means of reducing recidivism. ISP probationers are monitored more frequently than probation youth. Therefore, it seems reasonable to expect that the probability of detection of technical violations are exponentially increased for probationers in an ISP. However, the relationship between enhanced surveillance and a greater propensity for ISP reoffending is less clear. Frequent contact with probation officers may produce a labeling effect, in which probationers' self-concept is adversely impacted through a process of reactive formation. Another

theoretical argument could be made that the requirement of attending rehabilitative programs, school, office meetings, and drug testing appointments frequently may be viewed as coercive, thus creating strain. Such strain could be construed as a presentation of noxious stimuli, consequently increasing the likelihood of obtaining a new law offense. More research could be undertaken to explore these possibilities.

A final policy implication is that boys' needs should be granted equal consideration as those of girls. This is because the factors that are most often associated with boy offending are thought to be default explanations of delinquency and there is very little emphasis placed on addressing the factors. For instance, more efforts should be exerted towards addressing gangs, special education, and labeling effects wrought by the criminalization of boys. Each of these factors is more frequently a problem for boys than girls. In providing services to address these factors, perhaps boys might be better served while being supervised in ISPs.

Several possible future studies using the same quasi-experimental research design are apparent. First, the current study should be repeated with a larger sample using girls in the FIP. The results of such a study would prove useful in evaluating the program's effectiveness in reducing delinquency and rule out whether ISPs have differential effects on probation outcomes for boys and girls. Similar studies could also be conducted on other specialized community correction programs like gang and mental health probation. More information on the impact of juvenile justice interventions in the community setting would help to establish whether they are affecting boys and girls the same.

The findings in this study are subject to at least one limitation. Higher-risk girls may not have been included in the study and instead may have been monitored in one of the gender-specific programs like FIPs or human trafficking court programs. For this reason, the results of the current study should be interpreted with caution. This study has demonstrated that ISPs are associated with greater chances of unsuccessful probation outcomes for boys and girls than probation. To this author's knowledge, no study has explored gendered effects of ISPs on youthful offenders' probation. The second major finding was that ISPs had stronger effects on boys' probation outcomes than girls. This finding suggests that, in general, girls are less impacted by intensive supervision than boys. However, further testing should be conducted to confirm that boys and girls in ISPs are comparable.

This study also contributes to the advancement of methods in the criminological discipline. Propensity score matching is a fairly new statistical tool in criminological evaluation research. While its use does not necessitate the abandonment of

multivariate regression techniques, propensity score matching provides a robust alternative for evaluating justice interventions because the literature has long confirmed that selection bias is a problem in doing such research (Berk, 1983). With the surging popularity of propensity score matching underway, the evaluation of justice interventions is sure to soar in the future.

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