Factors Associated with Youths' Failure to Appear at Supervision Review Hearings

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Dedications

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Abstract

Factors Associated with Youths' Failure to Appear at Supervision Review Hearings
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Although thousands of youths across the country are placed under community-based supervision by juvenile courts, little research has examined how well youths perform under supervision or how their performance might be predicted. Recent investigation of probation practices in one jurisdiction provided relevant outcome data and identified failure to appear at a review hearing as a behavior strongly associated with subsequent probation revocation. This study examined probation department records for 200 youth under pre- and/or post-adjudication supervision in a large, mid-Atlantic county to determine whether prior findings replicated in a new jurisdiction, whether differences in factors associated with revocation emerged for youth under pre- and post-adjudication supervision, and whether any youth characteristics or behaviors were significantly related to failure to appear at a review hearing. In addition to identifying several similarities and differences between these two jurisdictions, results revealed significant relationships between youths' AWOL status and both failure to appear at the next review hearing and probation revocation at the next review hearing. Further, important differences emerged in the factors preceding revocation of pre- and post-adjudication supervision in this jurisdiction. These results add nuance to existing understanding of youths' performance under community-based supervision and implicate several potential avenues for further investigation.

CHAPTER 1: BACKGROUND AND REVIEW OF THE LITERATURE

Each year, the majority of justice-involved youth receive some form of community-based supervision, such as a probation disposition, prior to discharge from court supervision (Furdella & Puzzanchera, 2015). Youth under community-based supervision—whether it occurs before or after adjudication—typically reside in their communities, comply with conditions set forth by juvenile court judges, and regularly appear in court for review hearings, where a juvenile court judge determines whether the youth has been satisfactorily adhering to imposed requirements (Sickmund, 2003). After learning of the youth's compliance, or lack thereof, the presiding judge may decide to revoke community-based supervision, which can lead to the youth's commitment to a residential facility. Removed from established support systems, youth confined to such residential placements often face harsh conditions that can result in negative consequences long after discharge (e.g., Dmitreva, Monahan, Cauffman, & Steinberg, 2012; Lambie & Randell, 2013; Mendel, 2011).

A recent investigation of juvenile probation in a mid-Atlantic, largely urban jurisdiction revealed that more than half of youth probationers failed to comply with at least one court-imposed requirement (NeMoyer, Goldstein, McKitten, Prelic, Ebbecke, Foster, & Burkard, 2014). Additionally, nearly half of youth on probation in this jurisdiction had probation revoked and, thus, were committed to a residential facility at least once prior to discharge from court supervision (NeMoyer et al., 2014). Further research in this jurisdiction revealed that failure to appear at a scheduled review hearing demonstrated an overwhelmingly strong relationship with probation revocation and residential facility placement (NeMoyer, Brooks Holliday, Goldstein, & McKitten, 2016).

However, this research was based on a single sample of youth on probation in one urban county, and it did not investigate predictors of supervision revocation at other stages of the juvenile justice process (i.e., pre-adjudication supervision). To determine whether failure to appear associates with revocation of community-based supervision more broadly, we must examine data from youth in other jurisdictions. Beyond enhancing the generalizability of these findings, identifying potential warning signs for these absences will likely be useful to juvenile justice personnel—juvenile probation officers and defense attorneys, in particular—who wish to prevent such obstacles to youths' successful completion of supervision.

1.1 Community-Based Supervision in the Juvenile Justice System

Every year, thousands of youth in juvenile justice systems across the United States undergo formal or informal community-based supervision (Furdella & Puzzanchera, 2015). Such supervision may occur prior to adjudication—where it often represents an opportunity for youth to be diverted from further formal processing—or following adjudication, where it is commonly known as probation (Furdella & Puzzanchera, 2015). Such dispositions are typically preferred over residential facility placement because youth can remain in their homes and communities while still receiving court services and supervision (Davis, Irvine, & Ziedenberg, 2014). However, youth under community-based supervision must comply with court-imposed requirements, meet regularly with their assigned probation officers, and appear in juvenile court for review hearings (Livsey, 2012). At such hearings, many states allow the child, as well as his or her attorney, family members, and probation officer, to inform the presiding judge of the youth's progress under supervision (Levick & Desai, 2007). Although probation officers

typically make recommendations for responding to the youth's adherence to or noncompliance with supervision, the final decision lies with the judge, who might decide to impose new requirements, modify or remove existing requirements, discharge the youth from court supervision after successful completion, or revoke supervision—the outcome of which typically depends on the type of supervision imposed. For example, if a child was under pre-adjudication supervision at the time of revocation, the judge might decide to adjudicate the child and subsequently impose a probation disposition or commit the child to a residential placement facility. In contrast, if the child was under post-adjudication supervision at the time of the hearing, revocation would likely result in residential placement.

An abundance of research has demonstrated the negative effects of facility placement on youth. Consequences can include neglect, physical and sexual victimization, and increased rates of physical and mental health problems—that often go untreated—while in confinement (e.g., Beck, Harrison, & Guerino, 2010; Lambie & Randell, 2013; Wasserman, Ko, & McReynolds, 2004), as well as major difficulty achieving educational and employment goals upon discharge (e.g., Lambie & Randell, 2013; Taylor, 1996; Western & Beckett, 1999). Further, youth with a history of confinement have often been shown to demonstrate an *increased* risk of recidivism, even when controlling for several demographic and offense history factors (DeLisi et al., 2011; Gatti et al., 2009; Mendel, 2011). Taken together, these findings indicate that residential confinement often fails to rehabilitate youth, and may even contribute to a reduction in public safety, at significant financial cost (Holman & Ziedenberg, 2006; Mendel, 2011; Peeteruti, Walsh, & Velazquez, 2009). Thus, reducing the number of confined youth—

for example, by reducing the number of youth whose community-based supervision dispositions are revoked—should diminish the number of adolescents and young adults experiencing the negative effects of confinement and reduce the financial burden on the public. As a result, juvenile justice personnel would likely benefit from research identifying potential warning signs of noncompliance with, and subsequent revocation of, community supervision dispositions so that they can better facilitate successful completion.

1.2 Prior Research on Community-Based Supervision Outcomes

Despite the widespread use of community-based supervision to monitor youth across the country, little research has examined how well youths perform under supervision or how their performance might be predicted. Assigned probation officers typically track youths' progress under supervision, noting instances of noncompliance with imposed requirements. Notably, youths' noncompliance with community-based supervision typically involves behaviors that would constitute technical violations of supervision—actions that, although contradictory to a judge's orders, would not otherwise meet the definition of a delinquent act (for example, failing to submit to a drug test, missing curfew, or misbehaving in school)—as opposed to noncompliance in the form of a new arrest or adjudication (Leiber & Peck, 2013; NeMoyer et al., 2014; Smith, Rodriguez, & Zatz, 2009). Previously documented rates of noncompliance with community-based supervision vary by jurisdiction, by data source, and by definition of noncompliance. For example, one research group found that probation noncompliance was documented in the court records of approximately 14% of examined youth in Arizona (Smith, Rodriguez, & Zatz, 2009); however, this study examined official court

records, only noting noncompliance that resulted in a youth's probation officer filing a formal violation of probation petition. A statewide investigation of youths' discharge summaries—compiled by probation officers—in Illinois revealed that about 40% of all juvenile probationers were found to have committed at least one technical probation violation during their time under supervision (Adams, Olson, & Adkins, 2002). A more recent investigation of defense attorney documents—which often included youths' self-reported noncompliant behaviors—found that 52% of youth in a mid-Atlantic, largely urban jurisdiction failed to comply with at least one court-imposed requirement while under court supervision (NeMoyer et al., 2014).

Research with adults has demonstrated that gender, age, marital status, education level, race, employment, community type (e.g., rural versus urban), and prior criminal history are linked to probation success or failure (Morgan, 1994; Olson, Weisheit, & Ellsworth, 2001; Schulenberg, 2007). Similar characteristics have emerged as predictors among youth, as documented noncompliance has been linked to minority race and ethnicity, as well as low socioeconomic status, prior justice involvement, prior probation noncompliance, histories of family conflict, and residential instability (e.g., NeMoyer et al., 2014; Smith, Rodriguez, & Zatz, 2009).

1.3 Revocation of Community-Based Supervision and Out-of-Home Placement

Although youths' noncompliance with community-based supervision does not always result in revocation and residential placement, noncompliant behavior has been repeatedly linked to such outcomes—particularly when youth are under post-adjudication supervision (Leiber & Peck, 2013; McGuire, Fearn, Kuhn, & Mayo, 2013). According to the Office of Juvenile Justice and Delinquency Prevention (OJJDP) census, technical

probation violators make up 24% of youth in detention or placement facilities nationwide (Sickmund, Sladky, Kang, & Puzzanchera, 2015).

The few extant studies investigating outcomes of community-based supervision suggest that characteristics such as race, country of origin, severity of original charge, prior incarceration history, employment status, family conflict, substance abuse, and mental health needs have been associated with commitment following a probation violation (Glisson & Green, 2006; Harms, 2006; Mallett & Stoddard-Dare, 2010; Pulis, 2014; Rodriguez, 2010). Attempts to investigate gender differences in supervision revocation have produced mixed results, with some evidence suggesting that girls are more likely to receive harsher sanctions (i.e., facility commitment) than boys for technical probation violations (Pulis, 2014; Tracy, Kempf-Leonard, & Abramokse-James, 2009), some evidence indicating that such commitment occurs at similar rates for both genders (Kong & AuCoin, 2008), and other evidence suggesting that male youth probationers are more likely than female youth probationers to recidivate via rearrest—an action that frequently results in facility commitment, even more so than technical probation violations (Frederick, 1999; Leiber & Peck, 2013; Onifade et al., 2008).

Of note, the majority of prior research in this area has focused primarily on youth-specific factors rather than on factors that can change from hearing to hearing. Canadian research on such variable factors has revealed that the number of conditions imposed, type of probation violation (i.e., the form of noncompliance), and the number of violations were all significantly associated with juvenile probation violation and, often, facility commitment (Latimer, 2011; Pulis, 2014). In one U.S. jurisdiction—in which probation revocation automatically results in residential placement—youths who failed to

appear at a review hearing increased the odds that they would have probation revoked at their next hearing by more than 60, compared to youths who were not identified as "failing to appear" at the prior hearing (NeMoyer et al., 2016). Probation noncompliance via rearrest and school-related issues (e.g., attendance) were also significantly associated with revocation and placement in that study (NeMoyer et al., 2016). Continuing to collect this type of data in additional jurisdictions can serve as an important step in developing strategies to promote youths' successful completion of community-based supervision and prevent the negative outcomes associated with confinement.

Perhaps given how recently the above results were published, researchers have yet to focus specifically on characteristics of youth who fail to appear at supervision review hearings, despite the considerably strong relationship observed between this behavior and probation revocation. However, given adolescents' tendencies to overvalue immediate rewards and undervalue potential future losses (e.g., Steinberg, 2008), it is likely that youth under community-based supervision who have already demonstrated noncompliant behavior (e.g., failing a drug test, missing school) would subsequently fail to appear at a review hearing. Youth might view this behavior as a way to avoid judicial admonishment—an immediate gain—but fail to consider or appropriately value the risk of supervision revocation and residential placement as potential negative outcomes.

CHAPTER 2: CURRENT STUDY

2.1 Rationale

To add to the growing field of research regarding community-based supervision in the juvenile justice system, the current study attempted to determine whether factors associated with supervision noncompliance and revocation in one, previously examined

jurisdiction similarly link to these community-based supervision outcomes in youth from another jurisdiction. Specifically, this study identified youth characteristics and behaviors that preceded supervision noncompliance and revocation in a well-populated jurisdiction in a mid-Atlantic state. The examined jurisdiction was selected because, compared to a previously studied jurisdiction (NeMoyer et al., 2014; NeMoyer et al., 2016), it is similarly populous and in the same region of the country, but has more variety in community types (i.e., urban, suburban, and rural). Additionally, to expand upon existing research in this area, this study attempted to identify factors that were significantly associated with youths' failure to appear at supervision review hearings.

2.2 Hypotheses

This list of hypotheses identifies, first, predicted results of attempts to replicate prior research findings in this new jurisdiction, and, second, predictions related to new research questions about characteristics and behaviors associated with youths' failure to appear at a review hearing. Paralleling prior research findings on youths' noncompliance with community-based supervision (NeMoyer et al., 2014), I hypothesized that 1) youth who had engaged in noncompliant behavior during previous community-based supervision dispositions would have been more likely to fail to comply with the requirements of the examined supervision disposition; and 2) youth who received a substance-related condition (i.e., drug testing, drug/alcohol evaluation, and/or drug and alcohol counseling) would have been more likely to fail to comply with supervision conditions. Racial and ethnic disparities were also considered.

Regarding supervision revocation, I hypothesized that results from previous research (NeMoyer et al., 2016) would replicate for both pre- and post-adjudication such

that: 1) youth who failed to appear at the previous review hearing; 2) youth who incurred new charges prior to the examined hearing; and 3) youth who missed school prior to the examined hearing all would have been significantly more likely to have supervision revoked at a given hearing. I also investigated factors that were not significantly associated with supervision revocation in prior studies (e.g., age, gender). Racial and ethnic disparities in rates of supervision revocation were also considered.

Finally, in terms of factors significantly associated with failure to appear at a review hearing, I hypothesized that youth who: 1) went AWOL from home or supervision; 2) failed a drug test or admitted to using drugs or alcohol; and 3) demonstrated misbehavior at home or in the community before a given hearing all would have been significantly more likely to fail to appear at that hearing. Further, I explored the ways in which certain demographic variables (i.e., age, gender, race/ethnicity) were associated with failure to appear at a review hearing.

CHAPTER 3: METHOD

3.1 Participants

Data were collected from the probation department records of 200 randomly selected youth who underwent community-based pre- and/or post-adjudication supervision by the juvenile probation department in a well-populated jurisdiction in a mid-Atlantic state. Examined youth were discharged from either form of supervision between January 1, 2014 and December 31, 2014. Youth were not excluded if they experienced residential placement in addition to pre- and/or post-adjudication community-based supervision prior to discharge; however, information regarding youths' compliance with supervision was only gathered and examined during the periods of time

that youth were living in the community (i.e., not while youth were placed in a residential facility). Additionally, to be included, the youth's progress must have been evaluated at one or more review hearings over the course of their supervision. Sample youth ranged in age from 10 to 19 years (M = 16.10, SD = 1.63) at the time of first disposition for the examined referral. The majority of youth were Black/African American (67.5% Black/African American; 29.5% White; 2.5% Multiracial; 0.5% Native Hawaiian or Pacific Islander) and male (77.5% male; 22.0% female; 0.5% transgender).

3.2 Measures

A structured coding scheme was developed to record pertinent data for the current study, including youth-specific information (e.g., age, gender, and other demographic information; previous offending history; risk assessment scores), hearing-specific information (e.g., youth's presence or failure to appear at the hearing; hearing outcomes), and case management information (e.g., compliance with supervision requirements) recorded by probation officers between review hearings.

3.3 Procedure

Deidentified data from youths' probation department records were extracted from the county's probation supervisor database—which consists of information obtained from the statewide Juvenile Case Management System (JCMS), as well as case notes from juvenile probation officers and their supervisors—and reorganized into electronic spreadsheet format by juvenile probation administrators. Administrators assigned

¹ This jurisdiction does not currently have a formal method of tracking whether youth identify as transgender; however, one record included probation officer notes stating that the child—formally identified as male—began identifying as a female while under community-based supervision. Therefore, I identified this youth as transgender for the purposes of this study.

anonymous identification numbers to each coded file and removed any reference to identifying information from the dataset prior to sending it to the research team.

Five undergraduate and graduate research assistants were trained to accurately code relevant data from the extracted information over the course of three training sessions, during which they were introduced to the juvenile probation records and the coding scheme designed for the study. Research assistants then coded a sample file together, along with the primary investigator, discussing the coding items and ratings and developing a group consensus on each item. Each research assistant then independently coded an additional sample file and met with the primary investigator and other research assistants to discuss and resolve coding discrepancies. Following this training, research assistants independently coded two additional sample files that were also coded by the primary investigator. Each coder demonstrated good agreement with the primary investigator on these sample files (i.e., $\kappa > .75$ across all items for each file) before the team began coding in earnest. To maintain adequate levels of agreement throughout the coding process, 30% of cases were independently coded by both a research assistant and the primary investigator. Inter-rater reliability data were calculated for each of these 60 files; kappa values ranged from .75 to .99 (M = .91, SD = .06) for each case and the primary investigator met weekly with research assistants to resolve coding discrepancies.

3.4 Method of Analysis

Supervision-Related Descriptive Data and Noncompliance Factors

Descriptive data regarding specific supervision requirements imposed on youth, as well as noncompliance with those requirements, were reported in an attempt to generate basic information about the structure of community-based supervision for youth

in the examined jurisdiction. Additionally, to replicate previous research (NeMoyer et al., 2014), a logistic regression analysis was conducted with supervision noncompliance (no, yes) as the outcome variable; continuous predictor variables included age at community-based supervision disposition, age at first referral, number of probation requirements imposed over the course of supervision, whether the initiating referral included a felony-level charge (used as a proxy for charge severity), and the youth's total score on the Youth Level of Service Inventory (YLS; Hoge & Andrews, 2011), a riskneeds assessment which probation officers are instructed to administer as soon as possible after the child's referral to juvenile court. Whether a previous community-based supervision disposition was imposed (no, yes), gender (male, female or transgender), and race (white, non-white) served as categorical predictor variables. Additionally, to investigate whether any commonly imposed requirements were associated with supervision noncompliance, I conducted a logistic regression in which supervision noncompliance (no, yes) was simultaneously regressed on several of the most commonly imposed requirements (no, yes), each of which was imposed in at least 50% of the cases included in the sample.

Factors Related to Revocation of Pre- and Post-Adjudication Supervision

Although pre- and post-adjudication supervision share many similarities, they take place at different points in the juvenile justice process and have differing potential outcomes. For example, pre-adjudication supervision revocation can result in: 1) youth having charges dismissed prior to adjudication, 2) youth being adjudicated and placed on probation, or 3) youth being adjudicated and placed in a residential facility; whereas post-adjudication supervision revocation typically results in residential placement. As a result,

I thought it was important to separately examine pre- and post-adjudication supervision revocation for the following analyses.

To identify factors associated with pre- and post-adjudication supervision revocation at youths' review hearings, generalized estimating equation (GEE) analyses were conducted to account for the fact that youth under community-based supervision typically undergo multiple review hearings. Due to the dichotomous nature of the outcome variable (supervision not revoked vs. supervision revoked), I used a binary logistic link function, which is analogous to binary logistic regression with nesting (i.e., clustering hearings within youth). This technique accounts for the correlation among observations (i.e., hearings) for the same youth, yielding an odds ratio for each predictor variable while controlling for other included variables.

Fixed GEE predictors for both sets of analyses included age at hearing, gender (male, female or transgender), race (white, non-white), number of previous referrals, and whether the youth was charged with a felony-level offense during the initiating referral (no, yes). In addition, I examined whether certain forms of supervision noncompliance (no, yes)—as documented by probation officers and their supervisors in tracking notes—and whether the number of different types of noncompliance documented prior to the hearing were significantly associated with pre- and post-adjudication supervision revocation.

Factors Related to Failure to Appear at Supervision Review Hearings

To examine the factors associated with failure to appear at a supervision review hearing, generalized estimating equation (GEE) analyses were once again conducted to account for the fact that youth under community-based supervision typically undergo

multiple review hearings. Given that this analysis also includes a dichotomous outcome variable (no indication of failure to appear, noted failure to appear), a binary logistic link function was also used to account for the correlation among observations with the same youth. Fixed predictors included age at hearing, gender, and race. In addition, I examined whether certain forms of supervision noncompliance (no, yes)—as documented by probation officers and their supervisors in tracking notes—were significantly associated with youths' failure to appear at their subsequent review hearing.

Sample Size Calculations

I selected a sample size of 200 based on the recommendations established by Peduzzi and colleagues (1996). These recommendations suggest that sample size be calculated through the use of a formula, N = (10k)/p, to account for the number of predictors (k) as well as the expected proportion (p) of positive or negative cases—whichever is smaller—for the outcome variable. Applying this formula to youth-specific logistic regression analyses for the outcome variable of supervision noncompliance, I derived my target sample size from the maximum number of predictor variables in a given equation (i.e., 8) and the proportion of youth who did not demonstrate noncompliance (i.e., 48%) in a previous study (NeMoyer et al., 2016). The calculation revealed that a minimum of 167 youth records should be included in the analysis; to address the risk of missing data, I oversampled and collected data from 200 records.

Additionally, for hearing-specific analyses (i.e., supervision revocation), I used the same formula and included the maximum number of predictors (i.e., 15) and the proportion of youth who had supervision revoked (i.e., 46%) in a previous study (NeMoyer et al., 2016). The calculation revealed that a minimum of 326 hearings should

be included in the analysis. Assuming that each youth would have approximately 3.5 hearings (NeMoyer et al., 2016), 200 youth would provide approximately 700 hearings to analyze, thereby satisfying this requirement.

CHAPTER 4: RESULTS

4.1 Requirements Imposed

Descriptive analyses revealed that 46 discrete supervision requirements were imposed upon examined youth, including eight requirements that were imposed upon all youth under supervision in this jurisdiction (i.e., do not commit another crime, do not leave the county without permission, do not possess weapons, do not possess or consume alcohol or illicit substances, submit to search as directed, submit to drug testing as directed, attend school, and report to probation officer as directed). Overall, youth faced between 10 and 27 total requirements (M = 15.58, SD = 3.24) over the course of their community-based supervision. In addition to the requirements imposed upon all youth under supervision, judges most commonly imposed payment of fees and/or restitution, community service, a no contact order, and curfew as part of supervision; each of these additional conditions was required of at least 50% of examined youth. See Figure 1 for a complete list of imposed conditions.

Further investigation of requirements revealed that 47% of examined youth received either drug and alcohol treatment or mental health treatment while under community supervision, and approximately 11% of examined youth received both forms of treatment. Chi-square analyses were conducted to determine whether youth who were charged with a drug-related offense were more likely to receive substance-specific conditions. These analyses revealed that an alleged drug charge frequently preceded both

a drug/alcohol assessment requirement ($X^2(1, N = 200) = 12.89, p < .01, \varphi = .25$, small effect) and a drug and alcohol counseling requirement ($X^2(1, N = 200) = 4.52, p = .03, \varphi = .15$, small effect).

4.2 Common Forms of Noncompliance

Nearly 92% of examined youth probation records noted some failure to act in perfect compliance with the terms of community-based supervision (e.g., using drugs or alcohol, not attending school, incurring new charges). Of note, although the examined jurisdiction does not usually identify a deadline for youth to pay off court costs or restitution, outstanding payments can prevent youth from being discharged from supervision. Further, if a youth under pre-adjudication supervision does not make the required payments before the 12-month maximum length of this form of supervision, the supervision is often revoked.² As a result, when youth records included a probation officer note about outstanding payments, it was included as a form of noncompliance in the current analysis.

Regarding frequency of noncompliance, 76.5% of youth who were mandated to participate in one of several day and/or evening reporting program options demonstrated at least some noncompliance related to that program; 55.6% of youth ordered to pay fees and/or restitution had notes suggesting that outstanding payments may have contributed to a delay of supervision discharge; 54.3% of youth who were supervised via electronic home monitoring (EHM) failed, at some point, to comply with the rules of this program; 41.2% of youth who were given a mandatory curfew defied this curfew at least once; 33.3% of youth enrolled in drug and alcohol treatment demonstrated some issue related to

² According to juvenile probation personnel, judges in the examined jurisdiction would not revoke preadjudication supervision in response to outstanding payments *unless* this time limit had expired.

-

this requirement (e.g., missed scheduled appointments); and 32.0% of youth who were ordered to complete community service had some documented issue related to this requirement (e.g., failing to complete the required number of hours in a timely fashion).

In addition to noted noncompliance with imposed conditions, 57.5% of all sampled youth demonstrated noncompliance in the form of poor behavior at home or in the community, a descriptor for any reference to negative behavior displayed outside of school (e.g., PO receiving a negative report from parents); 47.0% had documented school attendance issues; 46.5% had documented school behavior issues; 40.0% failed to comply with supervision by failing a drug test or admitting to using substances; and 34.5% incurred a new charge while under community-based supervision. See Figure 2 for a complete list of noncompliance rates by supervision requirement.

4.3 Factors Related to Supervision Noncompliance³

As noted above, the vast majority of examined youth probation records included some reference to supervision noncompliance. Binary logistic regression was used to determine whether youths' supervision noncompliance (no, yes) was significantly associated with age at disposition, gender, (male, female or transgender), race (white, non-white), age at first referral, total number of requirements imposed during the course of the examined supervision, whether youth had received a previous pre- or postadjudication supervision disposition (no, yes), whether youth had been charged with a felony offense for the examined referral (no, yes), and YLS Total score. Results revealed

include this information for 21.5% of examined cases. As a result, documented noncompliant behavior was used as the outcome variable both to maintain consistency with previous research (NeMoyer et al., 2014) and to comport with the goal of identifying problematic youth behaviors rather than official decisions made

by juvenile justice personnel.

³ Attempts were made to use formal filing of a violation of probation (VOP) by a probation officer as an outcome variable (no, yes) for the analyses described in this section; however, available records did not

that supervision noncompliance was significantly associated with the total number of requirements youth received over the course of the examined supervision (b = .28, SE = .13, p = .03, OR = 1.32, 95% CI [1.02, 1.70]), such that youth with more requirements imposed over the course of their supervision were more likely to have demonstrated some form of noncompliance while they were under supervision. No additional significant relationships were identified. See Table 1 for more detailed results.

Curious as to how youths' YLS scores might relate to other examined factors, I conducted further analyses with a focus on this variable. More specifically, a series of independent samples t-tests were conducted with a variety of grouping variables, including race, gender, whether youth had previously undergone supervision in this juvenile court, whether there was any indication of noncompliance for a previous supervision disposition, whether a felony-level charge was included in the examined referral, whether the youth received a consent decree for the examined referral, and whether supervision was revoked during the examined referral. Of these variables, only a history of previous juvenile court supervision, t = -2.87, df = 94.97, p = .01, d = .46, 95% CI: [.14, .79], and a history of previous supervision noncompliance, t = -2.38, df = 28.27, p = .03, d = .70, 95% CI: [.09, 1.30], were significantly related to YLS total score. Additionally, Pearson correlations were conducted to determine whether YLS total score was significantly related to age at disposition, number of prior referrals to juvenile court, or the total number of requirements imposed over the course of supervision. Of these variables, only total number of requirements, r(182) = .26, p < .01, was significantly related to YLS total score, though the relationship was relatively weak.

Given the relationship between YLS total score and the total number of requirements imposed—and the previously identified relationship between number of requirements and supervision noncompliance—I conducted a stepwise logistic regression such that probation noncompliance (no, yes) was first regressed on YLS total score alone. A significant relationship was observed between these two variables, b = .11, SE = .04, p = .01, OR = 1.12. However, when both YLS total score and total number of requirements were entered into the model, YLS total score no longer demonstrated a significant relationship with noncompliance, b = .08, SE = .05, p = .07, OR = 1.09, but youth's total number of requirements did demonstrate a significant relationship with this outcome variable, b = .23, SE = .10, p = .02, OR = 1.26.

Because the majority of examined youth did not have prior community-based supervision experiences, prior noncompliance with such dispositions was not included in the initial logistic regression analysis—doing so would have reduced the number of youth included in the analysis by more than half. However, a separate chi-square analysis was conducted to determine whether noncompliance with a prior pre- or post-adjudication supervision disposition (no, yes) was associated with supervision noncompliance for the examined disposition (no, yes) for those 56 youth who had received a prior community-based supervision disposition. Results—using Fisher's exact test to account for expected observation infrequency—did not reveal a significant relationship (p = .06, $\varphi = .04$).

Additionally, to evaluate whether the imposition of specific probation requirements was significantly associated with supervision noncompliance, I planned to conduct a logistic regression in which supervision noncompliance (no, yes) was simultaneously regressed on the four most commonly imposed requirements (no, yes)—

each of these requirements was imposed on at least 50% of examined youth. Those requirements that were automatically imposed upon all youth in the examined jurisdiction could not be examined in this analysis because of the lack of variability in imposition. Similarly, given that 94.5% of youth were ordered to pay fees and/or restitution while under supervision, this requirement was removed from the analysis to avoid overfitting. Instead, a separate chi-square analysis was conducted to determine whether youth who were required to pay fees and/or restitution were significantly more likely to have failed to comply with the terms of their supervision. Results revealed no significant relationship $(X^2(1, N = 200) = 1.08, p = .30, \varphi = .07)$. Then, the logistic regression was conducted with the remaining three conditions; results revealed no significant associations between these conditions and supervision noncompliance. See Table 2 for more detailed results of this analysis. Similarly, investigation of whether the presence of any specific type of charge (i.e., property, drug, public order, against individuals, other) within the examined referral was associated with supervision noncompliance revealed no significant relationships. See Table 3 for more detailed results of this analysis.

4.4 Factors Related to Revocation of Community-Based Supervision

Of the 100 youth who initially received pre-adjudication supervision for the examined referral, 33 (33.0%) had that supervision revoked. Twenty-three out of these 33 youth subsequently received a post-adjudication probation disposition; in addition, 100 youth in this sample did not receive pre-adjudication supervision for the examined referral and, thus, were only under post-adjudication supervision. Of the 123 youth who were, at some point, under post-adjudication supervision for the examined referral, 39 (31.7%) had their post-adjudication supervision disposition revoked and, thus, were

committed to a residential placement facility at least once during their time under court supervision.

To identify factors associated with pre- and post-adjudication supervision revocation, data were organized by hearing. The total number of hearings per youth ranged from 2 to 35 (M = 8.76, SD = 6.47); however, only those hearings during which the court reviewed youths' progress under community-based supervision and made some ruling (i.e., review hearings that were not continued) were examined for these purposes (774 hearings). Sample youth underwent between 1 and 15 such hearings (M = 3.87, SD = 2.92); 226 of these hearings were held to review youths' progress under preadjudication supervision, and 548 of these hearings were held to review youths' post-adjudication dispositions. Although available records did not give clear indications of what was discussed at any given review hearing, probation officer notes indicated that some form of youth noncompliance occurred during the time period leading up to 632 (81.7%) of these non-continued review hearings.

Revocation of Pre-Adjudication Supervision

Noncompliance was noted in 174 (77.0%) hearings at which youths' progress under pre-adjudication supervision was reviewed; such hearings involved 100 individual youth (68.0% male; 62.0% of minority racial status) whose ages at initial disposition ranged from 10 to 18 (M = 15.79, SD = 1.72). Revocation occurred in 33 (14.6%) of the 226 examined review hearings. The 33 youths whose pre-adjudication supervision dispositions were revoked ranged in age from 10 to 18 at the time of initial disposition (M = 15.55, SD = 1.91); 72.7% were male, and 78.8% were identified as a member of a minority race. The most common form of noncompliance preceding such a revocation

decision was poor behavior at home or in the community—recorded prior to 39.4% of hearings that resulted in revocation. Other common forms of noncompliance included poor school behavior (33.3%), incurring new charges (30.3%), going AWOL from home or supervision (27.3%), and not paying required fees and/or restitution (27.3%); the remaining forms of noncompliance were recorded in fewer than 25% of hearings resulting in revocation. See Table 4 for a complete list. Prior to each of these review hearings, between 0 and 9 forms of noncompliance (M = 2.11, SD = 1.98) were documented in probation officer notes.

Results of GEE analyses revealed that multiple fixed characteristics were significantly associated with revocation of pre-adjudication supervision, including race (OR = 7.51), number of previous referrals (OR = .26), and whether the youth was charged with a felony offense during the examined referral (OR = .46), while controlling for other youth characteristics (i.e., gender, age at hearing) and several forms of supervision noncompliance. Notably, number of previous referrals and whether the youth was charged with a felony offense during the examined referral were both observed to demonstrate a significant *negative* relationship with revocation of pre-adjudication supervision. The only examined noncompliant behavior that was significantly associated with such revocation was incurring new charges (OR = 5.33). Several other forms of noncompliance (AWOL status, failure to appear at previous hearing, poor school behavior, not yet paying fees and/or restitution, poor behavior at home or in the community, using drugs or alcohol, and missing school) and the number of different forms of noncompliance documented prior to the hearing were not significantly

associated with revocation of pre-adjudication diversion. See Table 5 for information regarding odds ratios and confidence intervals for each variable.

Revocation of Post-Adjudication Supervision

Noncompliance was noted in 458 (83.6%) hearings at which youths' progress under post-adjudication supervision was reviewed; such hearings occurred for 123 individual youth (85.4% male; 81.3% of minority racial status) whose age at initial supervision disposition ranged from 12 to 19 (M = 16.20, SD = 1.56). Revocation occurred in 66 (12.0%) of the 548 examined post-adjudication supervision review hearings. Of note, revocation often occurred multiple times for the same youth; for example, a particular child may have had his initial post-adjudication probation disposition revoked, was sent to residential placement, returned to community-based supervision following his release from placement, and then had that supervision revoked. As such, 39 distinct youths had their post-adjudication supervision dispositions revoked; these youths ranged in age from 13 to 18 years (M = 15.50, SD = 1.36), 92.3% were male, and 84.6% were identified as a minority race. The most common form of noncompliance preceding a post-adjudication supervision revocation decision was incurring a new charge (recorded prior to 57.6% of hearings that resulted in revocation), followed by poor behavior at home or in the community (53.0%), going AWOL from home or supervision (53.0%), missing school (50.0%), using drugs or alcohol (42.4%), issues related to day and/or evening reporting program participation (31.8%), and poor school behavior (30.3); the remaining forms of noncompliance were recorded in fewer than 25% of hearings resulting in revocation. See Table 6 for a complete list. Prior to

each of these review hearings, between 0 to 10 forms of noncompliance (M = 2.54, SD = 2.03) were documented in probation officer notes.

Results of GEE analyses revealed that post-adjudication supervision revocation was not significantly associated with any fixed characteristics (i.e., race, gender, age at hearing, number of previous referrals, or whether youth was charged with a felony offense). However, documentation of several noncompliant behaviors was significantly associated with probation revocation at the next hearing. These behaviors included: incurring new charges (OR = 10.98), going AWOL from home or supervision (OR = 10.98) 6.81), using drugs or alcohol (OR = 5.35), missing school (OR = 3.81), and poor behavior at home or in the community (OR = 3.08). Notably, not yet paying court fees and/or restitution (OR = .36) was observed to demonstrate a significant *negative* relationship with probation revocation. Other examined forms of noncompliance (i.e., problems related to day and/or evening reporting programs, failure to appear at a previous hearing, and poor school behavior) were not significantly associated with probation revocation neither was the number of different types of noncompliant behavior noted prior to the hearing. See Table 7 for information regarding odds ratios and confidence intervals for each variable included in this analysis.

4.5 Factors Related to Failure to Appear at Review Hearings

Although failure to appear at a review hearing was not significantly related to preor post-adjudication supervision revocation in this study, given the strength of its association with supervision revocation in previous research (NeMoyer et al., 2016), further analyses focused on this outcome were conducted, using review hearings for youths under either form of community-based supervision. Additionally, because youth often failed to appear for multiple hearings in a row, only the first such hearing was included. All together, 876 review hearings were examined in the following set of analyses.

Failure to appear was noted in 43 (4.9%) review hearings; 9 (20.9%) of these 43 hearings were scheduled to review youths' progress while under pre-adjudication supervision and 34 (79.1%) were scheduled to review youths' progress while under postadjudication supervision. Thirty-one distinct youths (80.6% male; 83.9% of minority racial status) were noted to have failed to appear at such a hearing; these youths' ages at initial supervision disposition ranged from 14 to 18 years (M = 16.19, SD = 1.36). The most common form of noncompliance preceding a youth's failure to appear at a review hearing was going AWOL from home or supervision (recorded prior to 62.8% of hearings at which youth failed to appear), followed by missing school (30.2%), poor behavior at home or in the community (30.2%), not yet paying owed fees and/or restitution (27.9%), and poor behavior at school (20.9%). The remaining forms of noncompliance were recorded prior to fewer than 20% of hearings at which youth failed to appear. See Table 8 for a complete list. Of note, for 9.3% of the review hearings at which youth failed to appear, no indication of noncompliance was included in probation officer notes prior to the missed hearing.

Results of GEE analyses revealed that youths' failure to appear was significantly associated with age at hearing (OR = 1.38)—such that older youth were more likely to fail to appear at a review hearing than younger youth—and AWOL status prior to hearing (OR = 13.13). Additional characteristics and noncompliant behaviors (i.e., race, gender, missing school, poor behavior in home or community, not yet paying fees and/or

restitution, poor school behavior, EHM violation, using drugs or alcohol, and problems related to day and/or evening reporting program) were not significantly associated with a youth's failure to appear at a review hearing. See Table 9 for information regarding odds ratios and confidence intervals for each variable.

CHAPTER 5: DISCUSSION

Given the previously observed relationship between failure to appear at a probation review hearing and subsequent probation revocation (NeMoyer et al., 2016), a primary goal of this project was to determine which factors, if any, were associated with youths' failure to appear at a review hearing. Although failure to appear at a review hearing was not significantly associated with subsequent probation revocation in the current jurisdiction, this investigation produced results that may help guide the provision of targeted interventions for youth who appear to be at risk of failing to appear at a review hearing. Results suggesting that youth are frequently deemed AWOL prior to failing to appear at a review hearing—combined with the fact that pre-hearing AWOL status was linked to probation revocation at the hearing—might suggest a more nuanced relationship between failure to appear and subsequent probation revocation than was previously understood. Given that prior research did not examine the predictive value of youths' pre-hearing AWOL status, its potential as a mediator of that relationship may have been overlooked. Future research should attempt to establish a better understanding of the relationships among these variables.

Regarding the relationship between youths' age and failure to appear at a review hearing, the fact that older youth were more likely to fail to appear than younger youth might reflect the changing level of responsibility afforded to young people as they age.

For example, older adolescents may be expected to manage their own schedules including remembering the time and location of a review hearing and determining how to get to that location on time—more often than youth at the lower end of the sample's age range, who may be assisted by interested adults (e.g., parent, older sibling) to track their hearings and ensure adequate transportation. However, if juvenile justice personnel assume that older adolescents will remember the dates, times, and locations of upcoming hearings without assistance, they may be missing out on a relatively simple opportunity to provide additional support (e.g., providing reminders during regular meetings, texting youth a reminder the day before the hearing) to help facilitate youths' appearance at their hearings. Little to no empirical information exists about whether or how frequently probation officers across jurisdictions talk with their supervisees about the time and location of any upcoming hearings or about availability of transportation to and from those hearings. Future research might investigate the typical practices of probation officers in this regard and determine whether providing additional targeted supports could reduce failure to appear rates. Of note, the examined jurisdiction has identified youths' failure to appear in court as a targeted area for growth and, therefore, has dedicated time and resources to reducing failure to appear rates. Further evaluation of the effectiveness of these programs might provide useful information to other jurisdictions wishing to implement such programs.

5.1 Comparing Pre- and Post-Adjudication Supervision Revocation

Another important goal of this project was to determine whether previous research findings regarding revocation of community-based supervision (NeMoyer et al., 2016) would replicate in another jurisdiction within the same region of the country.

While organizing data for this analysis, it became clear that a distinction should be made between revocation of pre- and post-adjudication supervision given the variability in their potential outcomes. Separating the revocation-related analyses in this manner revealed noteworthy differences in the factors preceding revocation of each type of supervision.

Unlike findings related to post-adjudication supervision, analyses focused on preadjudication supervision revealed multiple fixed, youth-specific factors that were associated with revocation of this form of supervision, even when controlling for several pre-hearing behaviors. Findings regarding race (i.e., that minority youth were more likely to have their pre-adjudication supervision dispositions revoked at a given hearing) further contribute to the large body of evidence that, nationwide, youth of color are disproportionately negatively impacted at every decision point within the juvenile justice system, including those decisions that occur before formal adjudication (e.g., Bishop & Frazier, 1996; Mallett & Stoddard-Dare, 2010; Rodriguez, 2010). As such, these results suggest that juvenile justice system personnel might benefit from educational programming designed to help identify and address unconscious biases and reduce racial disparities in decision making. Of note, efforts at reducing racial and ethnic disparities at various juvenile justice decision points are already underway in the examined jurisdiction and across the state in which it is located, suggesting an awareness of such discrepancies, a commitment to addressing disproportionality, and a willingness to implement targeted reforms. Additionally, this race-based finding might implicate the contribution of other factors (e.g., socioeconomic status, family structure) frequently associated with race and ethnicity that could not be captured and examined in this study. Future research should further investigate the relationship between race and pre-adjudication supervision

revocation to identify missing explanatory variables, in addition to designing, implementing, and evaluating system-wide programming designed to target and reduce racial and ethnic disparities.

Also in contrast with post-adjudication supervision revocation, just one prehearing behavior—incurring new charges—demonstrated a significant relationship with pre-adjudication supervision revocation. Given that pre-adjudication diversion opportunities are typically a "second chance" for youth, grounded in an understanding that youth will desist from delinquent behavior without formal processing in the juvenile justice system (Petrosino, Turpin-Petrosino, & Guckenberg, 2013), judges may be particularly inclined to revoke pre-adjudication supervision dispositions for youth who fail to desist from further offending and/or demonstrate that they represent a threat to the community. As such, this finding may indicate that juvenile justice personnel are particularly committed to youths' successful diversion from formal processing prior to adjudication. If true, this commitment might suggest that judges and probation officers would support additional diversion opportunities for youth. Future research might ask judges for their opinions regarding new methods of diverting youth from formal juvenile justice processing and whether they would support building upon existing efforts in this area. It is also important to note that, because this analysis examined just those factors associated with supervision revocation, judges may have been responding to other forms of noncompliance in other ways (e.g., by increasing the intensity of supervision). Future studies might attempt to examine the ways in which juvenile court judges respond to the varying forms of noncompliance youth demonstrate while on pre-adjudication supervision.

Although initially surprising that *negative* relationships were observed between revocation of pre-adjudication supervision and both the number of prior juvenile court referrals and whether the initiating referral included a felony charge, a front-end selection bias may have contributed to these findings. Nationally, such pre-adjudication diversion programs tend to target first-time offenders and youth charged with misdemeanor offenses (Models for Change Juvenile Diversion Workgroup, 2011). Although the examined jurisdiction's state juvenile code does not specify explicit eligibility criteria, it is likely that its juvenile justice personnel consider similar factors when making decisions about who receives such an opportunity. Therefore, those youth who received this diversion opportunity *despite* a history of prior referrals and a felony charge in the examined referral may have demonstrated other protective factors (e.g., excellent school performance, supportive family, stable employment) that were identified by juvenile justice personnel during the diversion decision-making process; subsequently, these protective factors may have contributed to youths' successful completion of supervision. If this potential explanation applies, it might be useful to further investigate those protective factors—perhaps by surveying judges, probation officers, and youth—so that such information could be used in conjunction with existing knowledge of risk factors for negative supervision outcomes to better facilitate youths' successful completion of supervision. Further, future research might explore the specific charges that comprise prior referrals or represent instant felony-level offenses for those youth who undergo preadjudication supervision, as it may be that this relationship depends on the nature and severity of those charges.

5.2 Comparing Results to Prior Research

Comparisons between the current study and previous research (i.e., NeMoyer et al., 2014; NeMoyer et al., 2016) resulted in several noteworthy similarities and differences. For example, similarities emerged in several categories, including: the types of supervision conditions imposed on youth under supervision; how often youth failed to comply with requirements by incurring new charges and using illicit substances; how frequently a review hearing resulted in supervision revocation; some of the factors associated with probation revocation (i.e., incurring new charges, missing school); and how frequently a child failed to appear at a review hearing. Taken together, these similarities suggest that the juvenile courts and probation departments in both jurisdictions are similarly guided by principles of surveillance, community protection, and restorative justice; they might also indicate that certain basic characteristics of juvenile probation systems and youth probationers hold true across jurisdictions. Alternatively, these characteristics may only hold true in these jurisdictions because they are within the same state and, therefore, operate under the same juvenile code, despite having many differences in local policies and practice. Future research should continue investigating these research questions in other states and other areas of the country to determine whether similar findings emerge, thus contributing to a greater understanding of youth under community-based supervision across the United States and the systems through which they must navigate.

Although a documented noncompliance rate of nearly 92% initially appears much higher than rates identified in extant research (e.g., Adams, Olson, & Adkins, 2002; NeMoyer et al., 2014; Smith, Rodriguez, & Zatz, 2009), this discrepancy might reflect

the unique data source used in this examination. Specifically, this study extracted data from probation officers' informal notes about youths' progress under supervision written in real time over the course of supervision—as opposed to defense attorney's hearing notes (NeMoyer et al., 2014), official court records noting formal violation of probation petitions and decisions (Smith, Rodriguez, & Zatz, 2009), or information from probation officers at the time of case closing (Adams, Olson, & Adkins, 2002). Given the greater frequency with which probation officers meet with youth between hearings, their notes appear to be more comprehensive than previously used data sources and, likely, include more references to behaviors that are technically noncompliant with supervision requirements, but do not result in the filing of a formal violation of probation (VOP) petition. Additionally, notes documented over the course of supervision—as opposed to summaries written at the end of supervision that may have spanned years and involved multiple probation officers—highlights noncompliant behaviors that may have been forgotten or otherwise left out of discharge summaries. Given that prior research indicated that formal VOP petitions are filed far less frequently than youth technically fail to comply with their conditions (e.g., NeMoyer et al., 2014; Smith, Rodriguez, & Zatz, 2009), it appears that probation officers are using their discretion and refraining from filing a VOP at any instance of noncompliance. Further investigation might focus more specifically on the types of behaviors, youth characteristics, and situations that lead probation officers to file formal VOP petitions and how frequently such petitions result in supervision revocation.

Another noteworthy difference between this study and previous research relates to the factors associated with supervision noncompliance. Although a prior study identified

relationships between supervision noncompliance and 1) noncompliance with a previous supervision disposition, 2) race, and 3) imposition of conditions related to illicit substances (NeMoyer et al., 2014), only the total number of conditions imposed over the course of supervision was significantly related to supervision noncompliance in the current jurisdiction. This finding might suggest that adolescents have increased difficulty remembering and complying with a large number of supervision requirements—perhaps becoming overwhelmed by the prospect of trying to adhere to so many stipulations⁴ and, thus, put forth less effort to try to maintain compliance. To address this issue, juvenile justice personnel might consider establishing a limit to the number of conditions that can be imposed upon youth under community-based supervision, to reduce the likelihood of noncompliance. These results also implicate a larger discussion regarding appropriate limits on the number of supervision requirements with which youth should be expected to comply (see, e.g., Goldstein, NeMoyer, Gale-Bentz, Levick, & Feierman, 2016); the examined jurisdiction has been actively engaged in this discussion and its implications locally and as part of a statewide reform effort. Alternatively, this finding might reflect a tendency for juvenile court personnel to respond to youths' noncompliance by imposing more requirements (e.g., mandating drug/alcohol counseling in response to a failed drug test). If that were the case, future research might investigate the types of conditions that are imposed in response to noncompliance, whether they purport to further rehabilitative or punitive goals, and whether youth successfully comply with these added requirements.

⁴ Marketing and consumer science researchers have examined a similar concept known as "choice overload" (e.g., Iyengar & Lepper, 2000; Scheibehenne, Greifeneder, & Todd, 2010).

Finally, results of this study revealed important differences from previous research regarding those factors associated with revocation of post-adjudication supervision. In this jurisdiction, several pre-hearing behaviors (i.e., AWOL status, using illicit substances, and poor behavior at home or in the community)—in addition to incurring new charges and missing school, which were both identified in previous research (NeMoyer et al., 2016)—were significantly linked to probation revocation at a given hearing. These findings might suggest that judges in this jurisdiction were less likely than in the previously examined jurisdiction to show leniency to youth who refused to adhere to basic rules of community-based supervision (e.g., report to probation as directed, do not use illicit substances). It is important to note that, although some youth who engage in these behaviors may be intentionally defying court orders, such misbehavior by others may signal concerning issues for those youth. For example, some youth who run away from home and, therefore, miss school and are labeled "AWOL" by juvenile court personnel may be attempting to escape from familial maltreatment (i.e., abuse, neglect). Other youth who repeatedly test positive for illicit substances may be utilizing these substances as a way to cope with traumatic experiences or symptoms of an undiagnosed mental health disorder (e.g., Bolton, Robinson, & Sareen, 2009; McCauley et al., 2012). Also, information regarding youths' misbehavior at home or in the community might come from non-neutral third parties, such as youths' parents, who may act in their own interests or exaggerate reports based on frustration, thus calling into question their accuracy. As a result, although it may be logical for juvenile court personnel to revoke supervision of youth who defy its basic rules, using solely disciplinary measures without investigating the factors contributing to these forms of

misbehavior might also prevent courts from recognizing and addressing more serious needs for youth under their supervision. Additionally, results revealed that youth whose records indicated that they had not completed payment of fees and/or restitution prior to the examined hearing had reduced odds of having their probation revoked than did youth without such notes in their records. This relationship aligns with the principles of maintaining youth in the least restrictive environment (Greenwood & Turner, 2011; Howell & Lipsey, 2004), as continuing to owe money to the court—or even to a victim in the case of restitution—does not typically establish a concern for public safety that might justify committing youth to an out-of-home placement facility.

5.3 Limitations

Although this investigation made several contributions to research regarding youths' community-based supervision, findings should be understood within the context of study limitations. For example, because all analyses were correlational in nature, no causal conclusions can be made from observed findings. Additionally, because examined records were all from the same jurisdiction, it is unclear whether results based on these data will generalize to youth undergoing community-based supervision in other areas of the country. However, the examined jurisdiction improves upon several limitations to generalizability identified in previous juvenile probation studies (NeMoyer et al., 2014; NeMoyer et al., 2016). For instance, although the selected jurisdiction is located in the same state as the previously studied jurisdiction, it includes more diversity in community size and setting (i.e., urban, suburban, and rural areas) while maintaining a large population. Further, because the records reviewed in this study were randomly selected from all eligible youth who were supervised by the local juvenile probation department,

the sample was not limited to youth who were represented by public defenders—thus increasing its heterogeneity. Of note, despite these sample differences, many of the current results align with results from prior studies, suggesting reliability of findings across samples and some generalizability.

Some limitations also arose as a result of the source of the extracted data, namely the formal and informal probation officer records meant to track individual youths' progress under community-based supervision. These records were not developed with research aims in mind and did not include a standardized documentation format. As a result, differences in recording style across probation officers may have resulted in variability in the types and quantity of information available between and within records. This variability may have contributed to underestimation regarding frequency data, as some probation officers may have been less thorough than others in recording all pertinent variables. However, in addition to utilizing data from probation officer notes, this study also examined probation officer *supervisor* notes, thus providing some redundancy/inter-reporter reliability and reducing the chances that relevant information was missed during data collection. Further, despite identified limitations with the data source, use of probation officers' formal and informal notes from actual cases bolsters ecological validity in the study—researchers attempting to replicate findings in other jurisdictions should have access to records with similar limitations.

Additionally, when comparing the revocation factors associated with pre- and post-adjudication supervision, I grouped together all post-adjudication supervision hearings—whether the supervision disposition was imposed immediately following adjudication or as part of an aftercare plan following release from out-of-home

placement. However, the examined jurisdiction has varying levels of supervision intensity for youth on probation, with some youth, for example, required only to have regular supervision meetings with probation officers and others required to attend day and/or evening reporting programs each day. Although grouping these different types of post-adjudication supervision made the sample a bit more heterogeneous—comparing youth according to their probation intensity revealed differences by race, gender, and YLS score—this grouping facilitated the interpretability of results within the goals of this study, given that youth under any form of post-adjudication supervision faced revocation as a potential outcome during their review hearings.

Finally, for some analyses utilizing hearing-specific data (i.e., GEEs for community-based supervision revocation and GEEs for failure to appear at a hearing), I had initially planned to examine whether the specific judge presiding over the review hearing affected the odds of the relevant outcome. However, I could not include this variable in the model because of the large number of different judges, masters, and hearing officers that could have presided over a given hearing. Future research might focus on a larger sample of youth who appeared in front of each judge in a given district to determine whether this external variable demonstrates a significant relationship with supervision revocation or failure to appear at a review hearing.

5.4 Future Research

Investigators looking to build upon current findings might first address the limitations described above by expanding to other jurisdictions, perhaps in other states, to determine whether similar results emerge. It might be particularly valuable to examine whether jurisdictions with smaller populations than those previously studied demonstrate

similar data trends in community-based supervision for youth. Additionally, particularly enterprising researchers might study similar questions by tracking youth under community-based supervision in real time, thereby avoiding the need to use retrospective data and/or data initially compiled for non-research purposes. Alternatively, researchers might work with juvenile justice personnel to develop standardized methods of documenting youth progress under supervision, to improve the validity of subsequent evaluation.

Additionally, future projects in this area might seek a more comprehensive understanding of the significant relationships identified in the current study—particularly in regards to AWOL status, which was linked both to failure to appear at a review hearing and to post-adjudication supervision revocation. Additional investigation should attempt to better understand the relationships between and among these variables, as youths' pre-hearing AWOL status might serve as a mediator of the relationship between youths' failure to appear at a review hearing and subsequent probation revocation. Further, if youths' AWOL status has such an impact on supervision outcomes, it would be beneficial for researchers to determine whether there are any youth characteristics or behaviors that significantly increase the odds that youth will be labeled AWOL prior to a given review hearing. Such an investigation might assist in identifying vulnerable youth so that probation officers could intervene and provide support before their supervisees run away from home or otherwise lose contact with probation departments. Such early intervention may assist in reducing the number of youth who receive the AWOL label and, thus, reduce the number of youth whose probation dispositions are subsequently revoked.

Findings from the current study support previous findings indicating that youth who incur new charges and miss school are significantly more likely to have probation revoked at their next hearing (NeMoyer et al., 2016). Future research might focus on further investigating these variables. For example, revocation outcomes for youth who incur new charges might differ depending on the types of charges incurred (e.g., misdemeanor vs. felony, property vs. against individuals) or whether those charges were filed in juvenile or criminal court. Additionally, available data did not consistently include the reasons behind youths' educational absences, but it may be important to investigate whether youth who missed school for more "excusable" reasons—such as those staying home to care for younger siblings—experienced similar rates of revocation as those youth with more avoidable unexcused absences.

Finally, future research might focus more on the juvenile justice personnel involved in the decision-making process for youths' supervision outcomes. For example, rather than speculating about the characteristics and behaviors that influence judicial decisions about probation outcomes, investigators might ask judges to complete surveys regarding their likely decisions using vignettes and questionnaires in well-controlled studies with experimental designs. Further, although judges typically have the final decision regarding youths' probation outcomes, probation officers play a vital role in informing the court about youths' progress under supervision and providing recommendations for next steps. As a result, it would be valuable to determine how often judges agree with probation officer recommendations. If they typically agree, more focus on how probation officers decide what to recommend would be warranted. If these personnel do not frequently agree, it would be important to determine the nature of these

differences in opinion and whether such disagreements are associated with any specific youth characteristics or behaviors—or those of the juvenile justice system personnel.

5.5 Conclusions

The current study examined the structural characteristics of pre- and postadjudication community-based supervision in a well-populated jurisdiction with urban, suburban, and rural communities in a mid-Atlantic state. It also identified factors significantly associated with supervision noncompliance, supervision revocation, and failure to appear at supervision review hearings. Results of this study further support and add nuance to—existing understanding of the characteristics and behaviors associated with unsuccessful community-based supervision outcomes. They also contribute to a developing line of research designed to compile data about youth under community-based supervision, the requirements to which they must adhere, the common forms of supervision noncompliance in which youth typically engage, and the characteristics and behaviors typically associated with unsuccessful completion of supervision. Additional research in this area should aim to continue presenting practical information that juvenile justice personnel can utilize to identify youth who may be at risk for negative supervision outcomes, such as revocation and residential placement. Early identification of such youth should allow personnel and youth advocates to provide appropriate intervention and support, thereby facilitating youths' successful completion of community-based supervision.

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Table 1 $Factors\ associated\ with\ supervision\ noncompliance\ (N=200\ youth)$

Predictor	b	SE (b)	p	OR	95% CI
Race	.82	.57	.15	2.27	[.74, 7.00]
Gender	.39	.73	.60	1.48	[.35, 6.22]
Age at disposition	.36	.29	.22	1.43	[.81, 2.50]
Age at first referral	32	.26	.22	.73	[.44, 1.21]
Number of requirements	.28	.13	.03	1.32	[1.02, 1.70]
Prior supervision disposition	1.34	.74	.07	3.81	[.89, 16.19]
Felony-level charge	79	.72	.27	.45	[.11, 1.85]
YLS total score	.10	.05	.05	1.10	[1.00, 1.21]

Note: Nearly 92% of examined youth demonstrated some form of noncompliance.

Table 2 $Requirements \ associated \ with \ supervision \ noncompliance \ (N=200 \ youth)$

Predictor	b	SE (b)	p	OR	95% CI
Community service	51	.68	.46	.60	[.16, 2.29]
No contact order	27	.53	.62	.77	[.27, 2.17]
Curfew	.53	.52	.31	1.69	[.61, 4.70]

Note: Nearly 92% of examined youth demonstrated some form of noncompliance.

Note: Whether youth received "pay fees and/or restitution" as a requirement was not included in the model because of concerns related to overfitting. A separate chi-square analysis using this variable was conducted and did not reveal a significant relationship.

Table 3 $Types \ of \ charges \ associated \ with \ supervision \ noncompliance \ (N=200 \ youth)$

Predictor	b	SE (b)	p	OR	95% CI
Against individuals	27	.62	.67	.77	[.23, 2.58]
Property	.14	.61	.82	1.14	[.35, 3.75]
Drug	67	.70	.34	.51	[.13, 2.02]
Public order	61	.52	.24	.54	[.19, 1.51]
Other	01	1.10	.99	.99	[.11, 8.59]

Note: Nearly 92% of examined youth demonstrated some form of noncompliance.

Table 4 $Noncompliance\ preceding\ pre-adjudication\ supervision\ revocation\ (N=33\ hearings)$

Form of noncompliance	Number of times behavior preceded supervision revocation
Poor behavior in home or community	13 (39.4%)
Poor school behavior	11 (33.3%)
New charges incurred	10 (30.3%)
AWOL	9 (27.3%)
Has not yet paid fees/restitution	9 (27.3%)
Missing school	8 (24.2%)
Failed to appear at prior hearing	6 (18.2%)
Using drugs or alcohol	5 (15.2%)
Curfew violation	5 (15.2%)
Other noncompliance	4 (12.1%)
Problems at community service	3 (9.1%)
Missed meeting with probation officer	3 (9.1%)
Electronic home monitoring (EHM) violation	2 (6.1%)
Poor grades	2 (6.1%)
Problems related to day/evening reporting program	2 (6.1%)
Problems at drug and alcohol treatment	1 (3.0%)
Problems related to mental health treatment	1 (3.0%)
Problems related to Victim Awareness Curriculum (VAC)	1 (3.0%)
Problems related to anger management class	0 (0.0%)

Table 5

Factors associated with pre-adjudication supervision revocation (N = 226 hearings)

Youth-specific factors			
	p	OR	95% CI
Minority racial status (referent: white)*	<.01	7.51	[2.67, 21.09]
Age at hearing	.86	.98	[.82, 1.18]
Female or transgender (referent: male)	.11	.56	[.28, 1.13]
Felony-level charge* (referent: no felony-level charges)	.03	.46	[.23, .92]
Number of previous referrals*	<.01	.26	[.10, .65]
Noncompliance variables (Documented in the period preceding hearing)			
	p	OR	95% CI
New charges incurred*	.01	5.33	[1.47, 19.26]
AWOL	.05	5.06	[1.01, 25.45]
Failed to appear at previous hearing	.13	3.41	[.69, 16.81]
Poor school behavior	.20	1.87	[.72, 4.83]
Poor behavior in home or community	.40	1.75	[.48, 6.38]
Has not yet paid fees/restitution	.43	1.62	[.48, 5.44]
Using drugs or alcohol	.72	1.29	[.32, 5.19]
Missing school	.85	.89	[.27, 2.98]
Number of types of noncompliance	.25	.78	[.51, 1.19]

^{*} *p* < .05

Note: Both minority racial status and incurring new charges demonstrated a positive relationship with preadjudication supervision revocation; however, having a felony-level initiating charge and youths' number of previous juvenile court referrals demonstrated a significant negative relationship with pre-adjudication supervision revocation.

Table 6 $Noncompliance\ preceding\ probation\ revocation\ (N=66\ hearings)$

Form of noncompliance	Number of times behavior preceded supervision revocation
New charges incurred	38 (57.6%)
Poor behavior in home or community	35 (53.0%)
AWOL	35 (53.0%)
Missing school	33 (50.0%)
Using drugs or alcohol	28 (42.4%)
Problems related to day/evening reporting program	21 (31.8%)
Poor school behavior	20 (30.3%)
Electronic home monitoring (EHM) violation	15 (22.7%)
Other form of noncompliance	14 (21.2%)
Failed to appear at prior hearing	11 (16.7%)
Has not yet paid fees/restitution	10 (15.2%)
Missed meeting with probation officer	5 (7.6%)
Curfew violation	4 (6.1%)
Poor grades	3 (4.5%)
Problems at community service	3 (4.5%)
Problems at drug and alcohol treatment	3 (4.5%)
Problems related to mental health treatment	1 (1.5%)
Problems related to Victim Awareness Curriculum (VAC)	0 (0.0%)
Problems related to anger management class	0 (0.0%)

Table 7 $Factors\ associated\ with\ probation\ revocation\ (N=548\ hearings)$

Youth-specific factors			
	p	OR	95% CI
Age at hearing	.11	.84	[.68, 1.04]
Number of previous referrals	.16	.82	[.62, 1.08]
Minority racial status (referent: white)	.43	.71	[.30, 1.68]
Charged with felony-level offense (referent: no felony-level offenses)	.37	.68	[.30, 1.56]
Female or transgender (referent: male)	.10	.33	[.09, 1.24]
Noncompliance variables (Documented in the period preceding hearing)			
	p	OR	95% CI
New charges incurred*	<.01	10.98	[4.30, 28.00]
AWOL*	<.01	6.81	[2.63, 17.64]
Using drugs or alcohol*	<.01	5.35	[2.03, 14.08]
Missing school*	<.01	3.81	[1.67, 8.72]
Poor behavior in home or community*	.02	3.08	[1.20, 7.89]
Problems related to day/evening reporting program	.05	2.64	[1.00, 6.93]
Failed to appear at previous hearing	.40	1.79	[.46, 6.97]
Poor school behavior	.78	1.14	[.47, 2.75]
Number of types of noncompliance	.18	.74	[.47, 1.15]
Has not yet paid fees/restitution*	.02	.36	[.15, .85]

^{*} *p* < .05

Note: All significant variables demonstrated a positive relationship with probation revocation, with the exception of failure to pay fees/restitution.

Table 8 $Noncompliance\ preceding\ failure\ to\ appear\ (N=43\ hearings)$

Form of noncompliance	Number of times behavior preceded failure to appear
AWOL	27 (62.8%)
Missing school	13 (30.2%)
Poor behavior in home or community	13 (30.2%)
Has not yet paid fees/restitution	12 (27.9%)
Poor behavior at school	9 (20.9%)
Electronic home monitoring (EHM) violation	8 (18.6%)
Using drugs or alcohol	6 (14.0%)
Problems related to day/evening reporting program	6 (14.0%)
Other form of noncompliance	6 (14.0%)
Poor grades	4 (9.3%)
Problems related to drug and alcohol treatment	3 (7.0%)
Missed meeting with probation officer	3 (7.0%)
New charges incurred	2 (4.7%)
Problems related to community service	2 (4.7%)
Curfew violation	2 (4.7%)
Problems related to anger management class	1 (2.3%)
Problems related to Victim Awareness Curriculum (VAC)	1 (2.3%)
Problems related to mental health treatment	0 (0.0%)

Note: No instances of noncompliance were recorded in probation officer notes prior to 4 (9.3%) review hearings at which youth failed to appear.

Table 9 $Factors\ associated\ with\ youths\ 'failure\ to\ appear\ at\ review\ hearings\ (N=876\ hearings)$

Youth-specific factors			
	p	OR	95% CI
Minority racial status (referent: white)	.08	2.15	[.92, 5.02]
Female or transgender (referent: male)	.49	1.41	[.53, 3.81]
Age at hearing*	<.01	1.38	[1.14, 1.68]
Noncompliance variables (Documented in the period preceding hearing)			
	p	OR	95% CI
AWOL*	<.01	13.13	[6.86, 25.14]
Missing school	.39	1.39	[.66, 2.91]
Poor school behavior	.44	1.38	[.62, 3.06]
Electronic home monitoring (EHM) violation	.56	1.30	[.54, 3.11]
Has not yet paid fees/restitution	.29	.68	[.33, 1.40]
Poor behavior in home or community	.08	.56	[.30, 1.06]
Problems related to day/evening reporting program	.08	.43	[.17, 1.09]
Using drugs or alcohol	.10	.42	[.15, 1.18]

^{*} p < .05

Note: Both significant variables demonstrated a positive relationship with failure to appear at a review hearing.

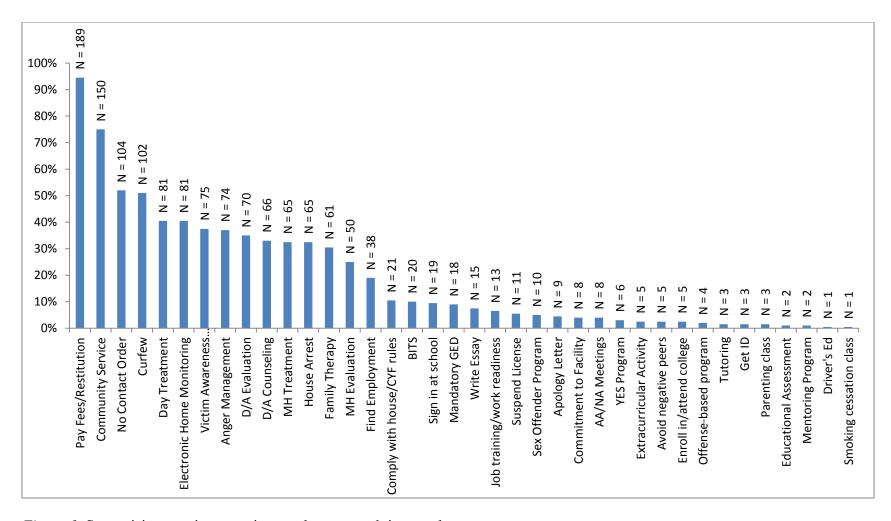


Figure 1. Supervision requirements imposed upon youth in sample.

Note. Eight additional requirements were imposed upon all youth under supervision in this jurisdiction (i.e., do not commit another crime, do not leave the county without permission, do not possess weapons, do not possess or consume alcohol or illicit substances, submit to search as directed, submit to drug testing as directed, attend school, and report to probation officer as directed).

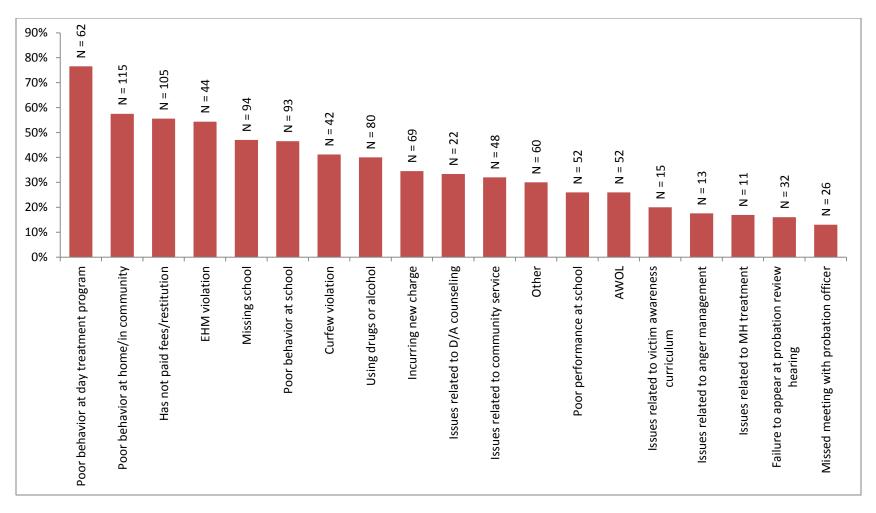


Figure 2. Percentage of youth who failed to comply with each supervision requirement, given receipt of requirement.

Note. All examined youth were eligible to fail to comply by demonstrating poor behavior at home or in the community, failing to attend school, demonstrating poor behavior at school, using drugs or alcohol, incurring a new charge, performing poorly in school, failing to appear at a review hearing, missing a probation officer meeting, and any "other" form of noncompliance.

Vita

Amanda NeMoyer

Amanda NeMoyer is a seventh-year JD/PhD student, currently completing her pre-doctoral internship at Emory University School of Medicine/Grady Health System in Atlanta, GA. Her interests include evaluating current juvenile justice practices, investigating the potential need for reform, and advocating for policy change. She defended her dissertation entitled "Factors Associated with Youths' Failure to Appear at Supervision Review Hearings" in March 2017 and expects to complete all doctoral degree requirements by June 2017. After internship, Amanda will complete a post-doctoral fellowship in Mental Health Services Research at Massachusetts General Hospital, with support from the National Institute of Mental Health and Harvard Medical School. Amanda earned her B.S. in Journalism and Psychology from Northwestern University in 2010, her M.S. in Clinical Psychology from Drexel University in 2013, and her J.D. from Drexel University School of Law in 2015.

Publications

- **NeMoyer, A.**, Brooks Holliday, S., Goldstein, N. E. S., & McKitten, R. L. (2016). Predicting probation revocation and residential facility placement at juvenile probation review hearings: Youth-specific and hearing-specific factors. *Law and Human Behavior*, 40(1), 97-105.
- Goldstein, N. E. S., **NeMoyer**, **A.**, Gale-Bentz, E., Levick, M., & Feierman, J. (2016). 'You're on the right track!' Using graduated response systems to address immaturity of judgment and enhance youths' capacities to successfully complete probation. *Temple Law Review*, 88(4), 803-836.
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- Heilbrun, K., **NeMoyer, A.,** King, C., & Galloway, M. (2015). Using third party information in forensic mental health assessment: A critical review. *Court Review*, *51*(1), 16-35.
- Brogan, L., Haney-Caron, E., **NeMoyer, A.**, & DeMatteo, D. (2015). Applying the risk-needs-responsivity (RNR) model to juvenile justice. *Criminal Justice Review*, 40(3), 277-302.
- **NeMoyer, A.,** Goldstein, N. E. S., McKitten, R., Prelic, A., Ebbecke, J., Foster, E., & Burkard, C. (2014). Predictors of juveniles' noncompliance with probation requirements. *Law & Human Behavior*, *38*(6), 580-591.

Professional Awards

Dissertation Grant (\$700), American Academy of Forensic Psychology (2016)

Outstanding Student Paper Award: American Psychology-Law Society Conference (2016)

Student Travel Award (\$500), American Psychology-Law Society Conference (2015)

Outstanding Student Poster Award: American Psychology-Law Society Conference (2014)

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Student Travel Award (\$500), American Psychology-Law Society Conference (2013)