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PREDICTORS OF INTENSIVE SUPERVISION PLACEMENT AMONG COMMITTED YOUTHS WITHIN A MAXIMUM-SECURITY RESIDENTIAL FACILITY

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PREDICTORS OF INTENSIVE SUPERVISION PLACEMENT AMONG COMMITTED YOUTHS WITHIN A MAXIMUM-SECURITY RESIDENTIAL FACILITY

by

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ABSTRACT

Some youths committed to juvenile justice residential facilities struggle to adjust and may exhibit institutional rule violations that necessitate an intensive supervision placement (ISP). ISPs require substantial institutional resources and may result in additional negative outcomes for these committed youths (e.g., additional charges, longer commitment). To date, only two studies have examined factors that place committed youths at greater risk of ISPs, and it was found that commitment length, number of arrests, age at admission, impulsive/reactive and psychopathic traits, and anger-irritability were predictive of ISPs (Taylor et al., 2007; Butler et al., 2007). The present study considered additional predictors that were identified in studies examining risk factors of adult administrative segregation and institutional misconduct of committed youths that may be predictive of ISPs during a youth's commitment. Using archival data collected from April 2010 to May 2011 on a sample of 119 committed youths (mean age = 16.44 years, 70% Black and 30% White) from a maximum-security residential facility, we evaluated whether age, race, gang membership, number of adjudicated offenses, institutional rule violations, externalizing symptoms, and internalizing symptoms predicted total number of ISPs. Additionally, we evaluated if major rule violations lead to more ISPs compared to minor rule violations. Results revealed that age and total number of institutional rule violations significantly predicted ISPs. Additionally, major rule violations predicted ISPs whereas minor rule violations did not. Based on these findings, clinical implications for justice-involved youths prior to entry into a residential facility, during commitment, and post-release are discussed.

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DEDICATION

This thesis project is lovingly dedicated to my husband, Durham, for his patience, love, friendship, and support. And to Finnegan, who reminds me of the necessity of rest and play.

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LIST OF ABBREVIATIONS

ADHD	Attention-Deficit/Hyperactivity disorder
APS	Adolescent Psychopathology Scale
CD	Conduct Disorder
DJJ	Department of Juvenile Justice
GAD	Generalized Anxiety Disorder
ISP	Intensive Supervision Placement
MTS	Multisystemic Therapy
ODD	Oppositional Defiant Disorder
PTSD	Post-Traumatic Stress Disorder

CHAPTER I INTRODUCTION

On any given day, approximately 48,000 youths are committed to juvenile justice residential facilities in the United States for offenses ranging in severity from misdemeanors to felonies (Sawyer, 2019). Justice-involved youths often present with more psychological and behavioral needs than youths without criminal justice involvement (Fazel et al., 2008) and are at greater risk for long-term negative outcomes such as poor educational attainment and entry into the adult correctional system (Aizer &Doyle, 2015). Historically, public opinion of the juvenile justice system has centered on the premise that justice-involved youths' behaviors and attitudes are potentially more modifiable than that of adults who are incarcerated because their personality characteristics and behavioral patterns are not yet fully engrained (Mulvey & Iselin, 2008; Steinberg & Cauffman, 1999), so a primary goal of juvenile residential facilities is rehabilitation to allow for youths' successful re-entry into the community (Welch et al., 2019). This opinion has largely been shaped by the idea that justice-involved youths should be protected from the detrimental environment of the adult criminal justice system and that the state should operate as a surrogate parent and act in the best interest of these youths (Butts & Mitchell, 2000; Krisberg, 2005; Mears et al., 2007; Mears et al., 2015). To foster rehabilitation, juvenile justice residential facilities are expected to provide educational opportunities along with additional services such as group therapy, recreational activities, physical fitness activities, religious programs, and opportunities for community service (Liddell et al., 2014). Despite these rehabilitation efforts, however, committed youths oftentimes have difficulty adjusting to this new environment, which may be due, in part, to an abrupt change in day-to-day behavioral expectations.

Indeed, some of the stressors faced by youths newly committed to a juvenile justice facility include adjusting to the social structure, rules, and regulations of the residential facility while also adapting to decreased contact with familiar social supports (i.e., family and friends). The stress associated with this transitional period may lead to an exacerbation of pre-existing emotional and behavioral problems (MacKenzie et al., 1995; Monahan et al., 2011) and some youths may develop internalizing symptoms such as depression (Kelly et al., 2019), withdrawal, and anxiety (Cesaroni & Peterson-Bedali, 2005; Cesaroni & Peterson-Bedali, 2010; Gover et al., 2000) or exhibit externalizing behaviors that violate institutional rules. Youths who struggle to adapt and who engage in rule violating behaviors could face negative consequences within the facility (e.g., institutional separation from general population, time added to their commitment, additional conditions of their release), thus, it is important to identify youths early on who may struggle with their adjustment in order to learn how to best to meet their needs.

Institutional Maladjustment

Prior work has conceptualized the manifestation of institutional maladjustment according to the deprivation model, the importation model, or an integrated model. Historically, these models were developed to explain maladjustment of incarcerated adults but have since been used to conceptualize maladjustment of committed youths. The deprivation model of adjustment suggests that institutional misconduct on behalf of adults who are incarcerated is primarily a result of custodial or institutional factors specific to correctional or detention facilities, which includes the deprivation of possessions, loss of freedom, and a lack of autonomy (Clemmer, 1940; Sykes, 1958). For example, institution-specific factors such as length of commitment, level of security, and

institutional rules are considered to influence how a person who is incarcerated adjusts to their new environment. These factors often require individuals who are incarcerated to conform to the institutional subculture to survive, which may involve violence or antisocial behaviors to get their needs met. The importation model, on the other hand, posits that institutional misconduct is a product of pre-institutionalized behaviors, experiences, and culture that are "imported" by the individual into closed custody facilities (Irwin & Cressey, 1962). Specifically, past arrests, gang involvement, and a history of violent offenses (e.g., aggravated assault, arson) have been shown to be linked to poor adjustment of incarcerated adults and committed youths. An integrated model where both institutional and individual factors are theorized to contribute to institutional maladjustment (Cao et al., 1997; Harer & Steffensmeier, 1996; Jing & Fisher-Giorlando, 2002) has shown some support in explaining why some adults and youths struggle to a greater extent than others when first arriving to residential or closed custody facilities (Cesaroni & Peterson-Bedali, 2005; Cesaroni & Peterson-Bedali, 2010; DeLisi et al., 2010b; Leitch, 2018; MacDonald, 1999, Pool & Regoli, 1983; Taylor et al., 2007).

Consequences of Institutional Rule Violations

Prior work has operationalized institutional maladjustment as the number of rule violating behaviors youths perpetrate while committed that are subsequently observed and recorded by facility staff. The severity of the rule violating behavior dictates the consequences youths receive for these acts. Best practices for behavior management in juvenile justice facilities follow a multi-tiered approach where there are graduated interventions to rule violations. Primary (lower-tiered) interventions consist of system-wide supports and strategies (e.g., token economies) to address minor rule violating

behaviors (e.g., disrespectful behavior, noncompliance; Deitch, 2014). However, for youths who engage in destructive, self-injurious, or violent behaviors that put themselves or others at risk of harm, higher-level interventions (e.g., separation from the general population) are used by correctional staff to maintain safety and security within the facility (Deitch, 2014). The practice of separating youths from the general population, often referred to as an Intensive Supervision Placement (ISP), is typically used to promote safety after all other interventions have been exhausted. The American Correctional Association has proposed best practice standards for committed youths' separation, which states that separation cannot be used as a disciplinary sanction, separation should not last longer than 24 hours, visual checks on youths by staff should occur at least every 15 minutes, and re-entry into the general population is only allowed after youths demonstrate emotional and behavioral control (ACA, n.d.). Understanding factors that place committed youths at-risk for separation is vital, given it requires greater institutional resources (e.g., one-on-one supervision, individualized behavioral plans and assessment), temporarily limits youths access to rehabilitative programming (e.g., group therapy, recreational activities, educational instruction in the classroom), and may have ramifications for youths' release from custody or precipitate transfer to other facilities (longer commitments, transfer to an adult facility, additional charges).

Predictors of Intensive Supervision Placements among Committed Youths

To date, only two known studies have examined predictors of committed youths' separation from the general population when initially adjusting to maximum -security residential facilities (Butler et al., 2007; Taylor et al., 2007). Butler and colleagues (2007) evaluated the relationship between The Massachusetts Youth Screening Instrument –

Version 2 (MAYSI-2; a brief screening tool used to identify committed youths at risk for mental-health related difficulties), intensive supervision placements (ISPs), and major rule violations (i.e., serious behaviors that indicate a disregard for the rights of others) in a sample of 104 adolescent males committed to a maximum-security residential treatment facility. The authors found that the Angry-Irritable subscale of the MAYSI-2 was significantly associated with both ISPs and major rule violations. Taylor and colleagues (2007) evaluated personality subtypes (i.e., anxious/inhibited, impulsive/reactive, psychopathy, unremarkable, and conforming) based on the Millon Adolescent Clinical Inventory (MACI) in addition to criminal history indicators such as age at admission, age at first arrest, total number of arrests, and length of commitment as predictors of intensive supervision placements (ISPs). Results revealed that membership in the impulsive/reactive subtype and the psychopathy subtype of the MACI was associated with a significantly higher number of ISPs. Additionally, the strongest predictor of ISPs was length of commitment at the facility followed by total number of arrests and age at admission, which was inversely related to ISPs. The current study intends to expand upon the findings of these studies by identifying additional predictors of institutional separation. This will be done by drawing from the research literature concerning predictors of administrative segregation among adults who are incarcerated and institutional misconduct among committed youths.

Predictors of Administrative Segregation among Incarcerated Adults

Despite the limited studies on predictors of ISPs among committed youths, there exists a modest body of research exploring factors that place incarcerated adults at greater risk of administrative segregation. Four studies (Motiuk & Blanchette, 1997; Thompson

& Rubenfeld, 2013, Wichmann & Nefekh, 2001; and Wichmann &Taylor, 2004) used data from the Correctional Service of Canada's Offender Management System to examine characteristics of incarcerated adults who have and have not been segregated from the general population and similar findings were revealed across studies. Overall, segregated persons tended to be younger, were involved with the criminal justice system as youths, had histories of prior segregation placements while in custody, were more likely to reoffend upon release or were assessed to have higher risk of reoffending (based on static factors such as past criminal history, offense severity, and sex offense history), had more criminogenic needs (based on an assessment of seven dynamic factors including employment status, marital status/family composition, social support from non-criminal peers, substance abuse history, community involvement, perceived control over one's life, and pro-social lifestyle characteristics), required additional institutional supervision, and had a greater number of past violent offenses and institutional rule violations Motiuk & Blanchette, 1997; Thompson & Rubenfeld, 2013; Wichmann & Nefekh, 2001; Wichmann & Taylor, 2004). Another study conducted by Lovell and colleagues (2000) used a U.S. sample to distinguish characteristics of incarcerated adults placed in administrative segregation from those in the general population. Similar to previous findings, it was found that incarcerated adults placed in administrative segregation tended to be younger, had been convicted of more violent offenses and exhibited a greater number of institutional rule violations. They also found that incarcerated adults in administrative segregation tended to have longer commitments than incarcerated adults who remained in the general population.

More recently, two predictive risk scales have been developed in an attempt to determine what factors place incarcerated adults at the greatest risk for administrative segregation. Helmus and colleagues (2019) used a sample (N = 16,701) comprised of both male and female incarcerated adults in the Canadian Correctional System. The sample was randomly divided into a development sample (N = 11,110) and a validation sample (N = 5,591). A total of 413 potential predictors of administrative segregation (for a length of at least 6 days) were examined including demographic variables, offense type, indicators of behavior during previous commitments (e.g., rule violating behaviors, number of past administrative segregation placements), and scores on several measures assessing risk of recidivism (i.e., Static Factors Assessment [SFA], Dynamic Factors Identification and Analysis [DFIA], Statistical Information on Recidivism-Revision 1 [SIR-R1], Custody Rating Scale [CRS]). A series of analytic approaches (i.e., logistic regression, principal components analysis, area under the curve) were used to select predictors that could be reliably coded, had good face validity, explained the greatest amount of variance, and were uniquely predictive of administrative segregation. In the end, 45 predictor items remained. From these items, several scales were derived from principal component analyses, but the most efficient scale (based on simplicity and predictive accuracy) included six items (age at admission, number of past adjudicated offenses, past administrative segregation placements, length of commitment, criminal versatility of committing offense [i.e., different types of committing offenses], and history of a violent offense). This scale, named the Risk for Administrative Segregation Tool (RAST), outperformed other existing measures (SFA, DFIA, CRS, reintegration potential rating) in predicting placement in administrative segregation when tested within

the validation sample (N = 5,591). The scale was also tested within subgroups of the incarcerated population (i.e., females, indigenous ancestry) and the predictive accuracy of the scale remained high.

Additionally, Labrecque and Smith (2019) used a sample (N = 96,337) comprised of both male and female incarcerated adults from a large Midwestern state Department of Corrections in the United States between the years of 2007/2008 and again in 2011/2012. The sample was randomly assigned to a construction group (N = 48, 197) and a validation sample (N = 48,140). Based on the results of a multivariate Logistic Regression model, the model retained six items that significantly predicted segregation placement: age at admission, commitment length, history of violent offenses, gang affiliation, serious mental health, and initial custody rating (i.e., minimum custody level, medium custody level, close maximum custody level, and super-maximum custody level). Lebrecque and Smith's (2019) risk assessment instrument, named the Risk Assessment for Segregation Placement (RASP) was able to significantly predict segregation placement and institutional misconduct for all gender, race, and sentence type subgroups of inmates. Despite the limited research in this area, several factors (i.e., age at admission, number of past violent offenses, greater number of institutional rule violations, and length of commitment) have been consistently identified across studies as risk factors for administrative segregation among incarcerated adults, which may be helpful in informing potential predictors of institutional separation or institutional supervision placement among committed youths.

Predictors of Institutional Misconduct among Committed Youths

Characteristics of segregated adults overlap to some extent with predictors of institutional misconduct among committed youths. For example, past violent offenses (e.g., physical fights, use of a weapon, aggression toward family members; DeLisi et al., 2010b; MacDonald, 1999; Pool & Regoli, 1983; Trulson, 2007) and total number of past offenses (DeLisi et al., 2010a) have been shown to predict institutional misconduct among committed youths. Other variables that have consistently predicted rule violating behaviors among committed youths across studies include gender (Tasca et al., 2010; Trulson, 2007; Van der Laan & Eichelsheim, 2013), minority status (DeLisi et al, 2010b; Leitch, 2018; McReynolds & Wasserman, 2008; Trulson, 2007), gang involvement (MacDonald, 1999; Trulson, 2007), age at admission (DeLisi et al, 2010b; McReynolds & Wasserman, 2008; Trulson, 2007), placement in high-level security facilities (i.e., custody-oriented institutions versus treatment-oriented institutions; Pool & Regoli, 1983; Trulson, 2007), length of commitment (McReynolds & Wasserman, 2008; Tasca et al., 2010; Van der Laan & Eichelsheim, 2013), externalizing symptoms (i.e., anger, irritability, aggression; Butler et al., 2007; Kelly et al., 2019; Leitch, 2018), internalizing symptoms (i.e., depression, anxiety, trauma-related symptoms; DeLisi et al., 2010b; Kelly et al., 2019), and positive attitudes toward aggression (as measured by attitudes toward the utility of physical toughness, manipulation, and exploitation within social relationships; Pool & Regoli, 1983).

Trulson (2007) examined potential predictors of institutional aggression (i.e., assaults, possession of a weapon) and found that in addition to gender, history of violent offenses, race, age at admission, gang membership, other variables such as out-of-home

placements, violence toward family members, and probation violations as committing offenses were significantly associated with aggression towards facility staff or other committed youths. Similar predictors of institutional misconduct are also seen in cross-cultural studies of justice-involved youths. In fact, Lai (2019) found that gang membership, volatile temper, victimization prior to or during their commitment, and current levels of stress predicted institutional misconduct (i.e., noncompliance, possession of contraband, physical fights with other youths or staff) in a sample of 1,045 Taiwanese youths committed across four residential facilities (i.e., three low-level security facilities housing youths with histories of nonviolent adjudicated offenses and one higher-level security facility housing youths with histories of violent adjudicated offenses). Similarly, Van der Laan and colleagues (2013) found that length of commitment and gender was significantly associated with institutional aggression in a sample of 2,255 Dutch youths committed to custodial centers (i.e., secured residential facilities that offer daily care, education, and interventions to youths). Overall, it appears that a history of violent behavior, gender, race, age at admission, length of commitment, and gang membership most consistently increase the risk of institutional misconduct among committed youths across studies; variables that have some overlap with predictors of administrative segregation among adults in closed custody facilities. See Table 1 for a visual representation of predictors of separation in committed youths and adults, predictors of rule violations in committed youths, and the variables examined in the current study.

Present Study

In sum, only two known studies have evaluated predictors of institutional separation in committed youths based on objective behavioral write ups and it was found that length of commitment, total number of prior arrests, age at admission, anger/irritability, and certain personality traits (impulsive/reactive and psychopathy) were significantly related to intensive supervision placements (Butler et al., 2007; Taylor et al., 2007). The present study aimed to extend these findings by drawing on similar studies with incarcerated adults (Helmus et al., 2019, Lovell et al., 2000; Motiuk & Blanchette, 1997; Thompson & Rubenfeld, 2013, Wichmann & Nefekh, 2001; and Wichmann &Taylor, 2004) and studies examining predictors of institutional misconduct among committed youths (DeLisi et al., 2010a; DeLisi et al., 2010b; Leitch, 2018; McReynolds & Wasserman, 2008; MacDonald, 1999; Pool & Regoli, 1983; Tasca et al., 2010; Trulson, 2007; Van der Laan & Eichelsheim, 2013) to identify additional variables that may be relevant in placing youths at greater risk for ISPs during their commitment to residential facilities. There appears to be some overlap in terms of the variables that increase the risk of administrative segregation among incarcerated adults and institutional misconduct among committed youths including age at admission, number of past offenses, length of commitment, and commitment to high security residential facilities. For the sake of inclusivity in the present study, predictor variables that overlap across these two distinct areas of research and variables that are specific to predicting youths' institutional misconduct (i.e., gender, race, gang membership, externalizing and internalizing symptoms, past victimization) were explored as potential predictors of ISPs. Identifying risk factors of institutional separation for committed youths is important, as it

may help inform prevention efforts, so youths are more likely to avoid the negative consequences (e.g., less access to rehabilitative resources, extended length of commitment, additional conditions of release) associated with multiple ISPs. Additionally, identifying risk factors of ISPs may aid in the development or modification of current risk assessment tools (e.g., the Residential Assessment of Youth; The Residential Care Youths Needs Assessment; The Massachusetts Youth Screening Instrument) used with justice-involved youths. These tools could be used to inform the type and intensity of rehabilitative services offered to youths at the onset of their commitment to help prevent maladjustment and subsequent ISPs.

Based on the extant literature and the variables available in the archival dataset from which these secondary analyses were conducted, it was hypothesized that committed youths who are younger at admission, are of racial minority status, endorse gang membership, have a greater number of past adjudications, have longer commitments, have a greater number of institutional rule violations, and have more externalizing symptoms (i.e., symptoms of Conduct Disorder, Oppositional Defiant Disorder, Attention-Deficit/Hyperactivity Disorder, substance abuse, anger), internalizing symptoms (i.e., symptoms of depression, anxiety), and symptoms or precursors of trauma-related symptoms (i.e., symptoms of Post-Traumatic Stress Disorder, history of abuse or neglect) will have a greater number of Intensive Supervision Placements (i.e., physical separation from the general population) during the first 14 weeks of their commitment (Hypothesis 1). It was also hypothesized that major rule violations (i.e., serious rule violations that indicate a disregard for the rights of others and that compromise the rehabilitation process and safety of other youths and staff) would be a

stronger predictor of ISPs as compared to minor rule violations (i.e., behaviors that violate the facility's rules but do not put youths or others at risk of harm) (Hypothesis 2).

CHAPTER II - METHODS

Participants

This study used archival data collected from April 2010 to May 2011 on 119 male youths committed to a maximum-security residential facility run by the Department of Juvenile Justice in the southeastern United States. At the time of entry into the facility, 3.4% of youths were 14 years old, 14.3% of youths were 15 years old, 21% of youths were 16 years old, 46.2% of youths were 17 years old, and 14.3% of youths were 18 years old. Overall, youths had a mean age of 16.54 years (SD = 1.01) at entry. In terms of their racial background, 70% (N=84) of these youths identified as Black and 30% (N=35) of these youths identified as White. All committed youths at this facility had extensive histories of delinquent behavior and were adjudicated for at least one felony charge with an average of 9 adjudicated offenses. Specifically, the types of offenses that led to their commitment were as follows: 19% violent offense, 52% property offenses, 5% drug offenses, and 24% probation violations. Youths' number of past commitments to a juvenile justice facility ranged from 1 to 5, with 38.5% of youths only having 1 past commitment, 35.2% having 2 past commitments, 20.5% having 3 past commitments, 3.3% having 4 past commitments, and .8% having 5 past commitments. A notable percentage of youths (17.2%) reported active gang involvement or membership. While in the facility, youths enacted a wide range of rule violations (Range = 0-284, M = 57.42, SD = 62.87). ISPs ranged from zero to 16 (M = 1.98, SD = 2.85). Youths had an average reading grade equivalency of 6.65 (SD = 3.12) as assessed by STAR reading test scores. Twenty-six (21.8%) youths were in middle school (i.e., grades 6-8), 54 (45.4%) youths were in early high school (i.e., grades 9-10), and 38 (31.9%) youths were in upper high

school (i.e., grades 11 and 12) or had obtained their GED prior to their admission to the facility.

Materials and Measures

Juvenile Court and Clinical Records. Demographic information, juvenile offense history data, and information from past psychological evaluations were available from a de-identified database that originated from youths' official criminal offense records. The variables of interest for this study included age at admission, race, self-reported gang membership, total number of adjudicated offenses, and history of maltreatment or trauma as reported in prior psychological evaluations.

Assessment of Psychopathology. The Adolescent Psychopathology Scale (APS; Reynolds, 1998a) is a self-report measure assessing 40 dimensions of psychopathology and has been normed with adolescents ranging in age from 12 to 19 years. The measure is comprised of 436 items and is written at a third-grade reading level. The Adolescent Psychopathology Scale – Short Form (APS-SF; Reynolds, 1998b) is an abbreviated self-report form derived from the long form of the APS and consists of 115 items. The APS has 20 Clinical Disorders scales (e.g., Conduct Disorder, Adjustment Disorder, Major Depression), 5 Personality Disorders scales (e.g., Avoidant PD, Borderline PD), 11 Psychosocial Problem Content scales (e.g., Self-Concept, Introversion) and 4 Response Style Indicator scales (i.e., validity scales assessing response consistency and accuracy); the APS-SF has 12 Clinical scales and 2 Validity scales. The APS and APS-SF Clinical Disorders Scales assess symptomology consistent with disorders found in the Diagnostic and Statistical Manual for Mental Disorders, 4th edition (DSM-IV). The APS-SF shares nine of its clinical scales with the APS but includes three unique scales labeled

Anger/Violence Proneness, Academic Problems, and Eating Disturbances; however, these unique scales have a great deal of item overlap with the Anger, Aggression, Attention-Deficit/Hyperactivity Disorder, Anorexia Nervosa, and Bulimia Nervosa scales on the APS. The two validity scales (Defensiveness and Inconsistency) are also unique to the short form but serve the same function as the Response Style Indicator scales of the APS.

The standardization sample for the APS included 1,827 adolescents from a school-based setting and 506 adolescents from clinical settings. Internal consistency values of the APS were high in both samples, with a median alpha coefficient of 0.85 in the school-based setting and 0.87 in the clinical setting. The clinical disorders scales had moderately high item-total correlations, with median item-total correlations ranging from 0.41 to 0.61 in the school-based sample and 0.40 to 0.65 in the clinical sample. The measure demonstrated good convergent validity with the Minnesota Multiphasic Personality Inventory -2 (MMPI-2); correlations ranged from 0.77 to 0.82. The APS-SF was standardized on a sample of 2,834 adolescents from a school-based setting and 506 adolescents from clinical settings. The clinical scales had internal consistency values at or above .80 for both the school and clinical sample. Test-retest reliability was found to be at or above .80 after the measure was administered twice within a two-week time frame in a sample of high school students (Carlson, 2014). Correlations of the APS-SF scales with their corresponding APS scales yielded coefficients of at or above .90 and moderately high correlations were found between the APS-SF and the MMPI-2, the Reynolds Adolescent Depression Scale (RADS), the Beck Depression Inventory (BDC), and the Suicidal Ideation Questionnaire (SIQ; Carlson, 2014).

The APS and APS-SF scales of interest for the present study included Conduct Disorder, Oppositional Defiant Disorder, Substance Use Disorder, Posttraumatic Stress Disorder, Major Depressive Disorder, and Generalized Anxiety Disorder. Given their level of item overlap and the strong correlations across scales, the APS-SF Academic Problems scale and the APS Attention-Deficit/Hyperactivity Disorder scale were combined to capture symptoms of ADHD and the APS-SF Anger/Violence Proneness scale was combined with the APS Anger scale to capture trait anger and aggressiveness. Internal consistencies for the present sample could not be calculated because the archival dataset does not contain item-level data.

Institutional Rule Violations. Facility staff (e.g., teachers, counselors, correctional staff) issued a behavioral write-up each time youths violated institutional rules. The behavioral write-ups described the youths' behavior and the severity of the rule violation (i.e., minor vs. major), which were then entered into a database by administrative staff. The research team initially involved in collecting these data were provided access to a de-identified version of this database and categorized the data into 12 behavioral categories, including a category used when behaviors resulted in an ISP (see Table 2). To develop the categorization framework (Smith et al., 2016), the team used a percentage of the data to develop the initial coding scheme and behavioral categories were operationalized according to how they are defined in the existing literature (Dodge et al., 1990; Green, 1990; Vachon et al., 2014). New behavioral categories were added when behaviors emerged in the dataset that did not fit the initial coding categories. When no new behavioral categories emerged, the categorization framework was applied to the rest of the data. Two raters coded these behavioral data for each participant and interrater

reliability across raters was found to be excellent (kappa = .92). See Table 2 for a visual representation of this categorization framework. For the present study, the total number of rule violations variable represented the total count of behaviors from all coded behavioral categories except the ISP category across a 14-week time frame. The major rule violations variable represented the total count of behaviors from the physical aggression, verbal aggression, destructive behavior, sexual behavior, self-harm, threatening behaviors, and attempted escape categories across a 14-week time frame. This categorization framework of major rule violations is based on the categorization framework used in previous studies (Butler et al., 2007; Smith et al., 2016). These behaviors constitute severe rule violations that impede the rehabilitation process and may put committed youths and others at risk of harm. Finally, the minor rule violations variable represented the total count of behaviors from the disrespectful behaviors, noncompliance, disruptive behaviors, and other rule violations categories across a 14-week time frame. These behaviors, although violations of the facility's behavioral policies, are not severe enough to put committed youths and others at risk of harm or seriously disrupt the rehabilitation process.

Intensive Supervision Placements (ISPs). The same database containing information about rule violations also indicated whether major rule violations resulted in an Intensive Supervision Placement (ISP). During an ISP, youths were removed from their regular residential housing unit and placed in a separate housing unit with other youths who were also in ISP. Youths could not leave the ISP unit to attend school or other recreational activities and were under one-on-one supervision (i.e., correctional staff were assigned to each youth in ISP). The total number of ISPs youths received

across their first 14 weeks at the facility was used as the primary outcome variable in the present study.

Procedure

The present study used archival data that was collected as part of a larger on-going study evaluating treatment programing at the residential facility. The Internal Review Board (IRB) at the university where the larger study was being conducted and the Department of Juvenile Justice (DJJ) approved the initial collection of these data and the use of de-identified archival data for future studies. Parental consent for youths' participation in the study was not required, as these youths were considered wardens of the state and the intended use of their data was for treatment evaluation purposes. The Principal Investigator of the larger treatment evaluation study permitted our research team access to a de-identified electronic database that contained youths' demographic information, criminal offense history, and data from past psychological evaluations; information that was extracted from each youth's file at the time of their arrival to the facility. Self-report measures, cognitive tests, and achievement tests (e.g., APS/APS-SF, STAR, WISC-IV) were administered to youths for the purposes of determining their needs for services after a two-week adjustment period. Thirty-three percent of youths in the sample were administered the APS while 67% of youths were administered the APS-SF. The version of the APS that was administered was dependent upon when youths were admitted to the facility, as the APS was replaced by the APS-SF to shorten the length of the intake battery. Standardized scores from the APS and APS-SF were entered into the same database that contained the extracted information from the youths' clinical files. Lastly, the research team was granted access to a second de-identified database of rule

violations, from which the team coded the rule violations into 12 behavioral categories. Behavioral data from the first 14 weeks of youths' commitment to the facility was used for the purposes of this study. This time frame was selected to capture the behavioral difficulties exhibited by youths during their initial adjustment to the facility. Further, youths began therapy services a few weeks after their commitment, which may have impacted their overall level of adjustment and subsequent behaviors and ISPs, so this 14-week period allows for a better picture of youths' behavior prior to receiving full access to facility programing and rehabilitation services.

CHAPTER III - RESULTS

Missing Data

The percentage of missing data for variables coded from juvenile court records (i.e., adjudicated offenses), clinical files (i.e., age, race, history of abuse, gang membership, commitment length, scores on the APS/APS-SF), and rule violation behavioral data across youths' first 14 weeks at the facility was examined. The percentage of missing data for age, race, history of abuse, gang membership, and adjudicated offenses ranged from .8% - 1.7% and the percentage of missing data for scales on the APS and APS-SF was only 1.7%. Shafer (1999) posits that a missing data percentage of 5% or less is inconsequential, thus, no method to handle missing data was used besides pairwise deletion. The percentage of missing rule violation data by week is as follows: week 0 (10.9%), week 1 (10.1%), weeks 2 and 3 (11.8%), weeks 4 and 5 (10.9%), week 6 (11.8%), week 7 (8.4%), week 8 (10.9%), week 9 (14.3%), week 10 (12.6%), week 11 (15.1%), and weeks 12 and 13 (16%). In general, the percentage of missing rule violation data tended to increase at each subsequent week, as youths were transferred to other facilities. Little's MCAR test was used to test the null hypothesis that the missing rule violation data was Missing Completely at Random (MCAR). This test was not significant ($\chi^2 = 1883.337$, $p = .99$), indicating that the null hypothesis was supported, and data were found to be missing completely at random. Multiple imputation using predictive mean matching (PMM) was used, as PMM is less sensitive to deviations from normality (i.e., overdispersion) (Vink et al., 2014) and because these study data met the suggested guidelines set forth by Jakobsen and colleagues (2017) such that: 1) more than 5% but less than 40% of the data were missing, 2) both the dependent variable (i.e.,

ISPs) and a predictor variable (i.e., rule violations) had data missing, and 3) data were MCAR. Twenty datasets were imputed based on Graham and colleagues' (2007) recommendation that 20 imputations are estimated when 10-30% of data are missing. The following variables were used as predictor variables when imputing the datasets: age at admission, race, gang membership, total adjudicated offenses, history of abuse and t-scores from 8 scales of the APS (i.e., Conduct Disorder, Oppositional Defiant Disorder, ADHD, substance abuse, anger/violence proneness, Major Depressive Disorder, Generalized Anxiety Disorder, PTSD). Rule violation data for weeks 0 through 13 were also used as predictors when missing values were imputed.

Preliminary Analyses

Prior to conducting the main study analyses to test our hypotheses, a series of analyses were run to ensure no assumptions of the planned statistical tests were violated. Descriptive statistics revealed that all predictor and outcome variables were within the range of their expected values. However, three study variables were identified as positively skewed, leptokurtic, and contained outliers based on a cutoff value of +/-3 for skewness and kurtosis: total adjudicated offenses (Skewness statistic = 1.98, *SE* = .22; Kurtosis statistic = 5.23, *SE* = .44), total rule violations (Skewness statistic = 1.62, *SE* = .23; Kurtosis statistic = 2.45, *SE* =.45) and symptoms of substance abuse (Skewness statistic = 1.71, *SE* = .224; Kurtosis statistic = 4.32, *SE* = .444). Additionally, two variables were found to be positively skewed and contained outliers but had no issues with kurtosis: symptoms of Major Depressive Disorder (Skewness statistic = .842, *SE* = .224) and Anger/Violence Proneness (Skewness statistic = .702, *SE* = .224). Considering that the spread of each of these variables is within the range of possible values and

represents the true variance within this high-risk population, no steps were taken to correct the normality of these variables. The outcome variable (sum of all ISPs across 14 weeks) was also identified to be positively skewed (Skewness statistic = 2.15, *SE* = .226) and leptokurtic (Kurtosis statistic = 5.79, *SE* = .449); however, this is the result of a high percentage of zeros (i.e., no placements in ISP). As this is also an accurate representation of these data, the high percentage of zeros were handled at the analytic level (i.e., negative binomial regression). Multicollinearity (i.e., highly correlated independent variables) was tested by generating tolerance statistics and a cutoff value of .2 was used to determine if the independent variables were too highly correlated (Weisburd & Britt, 2013). No values fell below .2, so the multicollinearity assumption was not violated. The assumption of homoscedasticity was assessed by generating scatterplots of the regression standardized residuals and the regression standardized predicted values. All scatterplots appeared roughly rectangular in shape; thus, the assumption of homoscedasticity was not violated.

Intercorrelations Between Study Variables

To determine if the predictor variables and the outcome variable (i.e., total ISPs across 14 weeks) were related to each other as expected, Pearson correlations were run with continuous variables and point-biserial correlations were run with dichotomous variables (i.e., race, gang membership, history of abuse). The outcome variable was significantly and negatively correlated with age at admission (r = -.26, p = .006) and significantly and positively correlated with total rule violations (r = .48, p <.001).

Regarding correlations between the predictor variables, as expected, total rule violations were significantly and negatively correlated with age at admission (r = -.28, p

= .003) and significantly and positively correlated with race ((*r* = .24, *p* = .01), gang membership (*r* = .21, *p* = .011), and Conduct Disorder (*r* = .21, *p* = .03). Unexpectedly, total adjudicated offenses were not significantly correlated with any other predictor variable. Lastly and as expected, age at admission was significantly and negatively correlated with gang membership (*r* = -.23, *p* = .01), Conduct Disorder (*r* = -.32, *p* <.001), Oppositional Defiant Disorder (*r* = -.28, *p* = .002), ADHD (*r* = -.21, *p* = .02), and anger/aggression (*r* = -.29, *p* = .002). Refer to Table 3 for the results of all correlations between study variables.

Data Analytic Strategy for Main Study Analyses

The outcome variable for our two study hypotheses is a count variable representing the total number of instances youths were placed in ISP across 14 weeks. Additionally, the outcome variable is not normally distributed, because it is a low frequency occurrence that is typically reserved when youths are at risk of harming themselves or others. When running a regression analysis with a count outcome variable, either a Poisson regression or a negative binomial regression analysis is the suggested statistical approach (Hilbe, 2011). A one-sample Kolmogorov-Smirnov test revealed that total number of ISPs did not follow a Poisson distribution, *K-S Z* = 2.139, *n* = 114, *p* <.00, so a negative binomial distribution was a more appropriate fit to the data.

A series of negative binomial regression analyses were used to test both Hypothesis 1 and Hypothesis 2. For Hypothesis 1, age at admission, race, gang membership, total number of adjudicated offenses, total rule violations, history of abuse, commitment length, and symptoms of Conduct Disorder, Oppositional Defiant Disorder, ADHD, substance abuse, Major Depressive Disorder, Generalized Anxiety Disorder,

PTSD, and anger/violence proneness were entered as predictor variables and total number of ISPs was entered as the outcome variable. To test Hypothesis 2, the total count of major rule violations (i.e., verbal aggression, physical aggression, threatening behaviors, destructive behaviors, sexual behaviors, self-harm, attempted escape) and minor rule violations (i.e., disrespectful behaviors, disruptive behaviors, noncompliance, other rule violations) across a 14-week initial adjustment period to the facility were entered into the model as predictor variables and total number of ISPs was entered as the outcome variable.

Main Study Analyses

Results of the negative binomial regression analysis testing Hypothesis 1 revealed that total rule violations significantly predicted total ISPs, B(SE) = .01 (.002), IRR = 1.01, 95% CI = .004 - .015, p <.001. These results suggest that for every additional rule violation perpetrated by a youth, there is a 1.01 times greater likelihood of an ISP. Additionally, age at admission significantly predicted ISPs, B (SE) = -.29(.14), IRR = .75, 95% CI = -.55 – -.02, p = .043; for every one year decrease in age, there is a .75 times greater likelihood of an ISP. None of the remaining predictor variables entered into the model significantly predicted total ISPs. Refer to Table 4 for the results of this binomial regression model examining potential predictors of ISPs.

Results of the negative binomial regression testing Hypothesis 2 revealed that major rule violations (i.e., physical aggression, verbal aggression, destructive behaviors, sexual behaviors, threatening behaviors, self-harm, attempted escape) significantly predicted total number of ISPs, B(SE) = .04(.01), IRR = 1.04, 95% CI = .02 - .07, p = .002, whereas minor rule violations (i.e., noncompliance, disrespectful behaviors,

disruptive behaviors, other rule violations) did not, B(SE) = .002(.004), IRR = 1.00, 95% CI = -.01 - .01, p = .58. These results suggest that for every major rule violation enacted by a youth, there is a 1.04 times greater likelihood of an ISP.

CHAPTER IV – DISCUSSION

The present study aimed to explore a multitude of potential predictors of Intensive Supervision Placements (ISPs) among committed youths in a maximum-security residential facility. Specifically, this study sought to extend findings from prior studies that found that anger/irritability, length of commitment, total number of prior arrests, age at admission, and certain personality traits (i.e., impulsive/reactive and psychopathy) significantly predicted ISPs (Butler et al., 2007; Taylor et al., 2007). As far as we are aware, there have been no other studies examining factors that place committed youths at greater risk of ISPs. Considering this is an understudied area of research, we drew upon studies that have examined predictors of administrative segregation in incarcerated adults and predictors of institutional misconduct in committed youths to identify additional possible predictors of ISPs for committed youths. Identifying factors that place committed youths at a higher risk for ISPs is important, given its potential for interrupting youths' rehabilitative services, extending their commitment length, or negatively impacting their conditions of release. Additionally, a better understanding of what might lead to ISPs may better inform rehabilitative services for youths at the onset of their commitment (e.g., informing risk assessment tools, targeted interventions) before these negative outcomes associated with ISPs occur.

Results of the current study revealed that only two (i.e., age at admission, total rule violations) of the 15 variables examined in this study significantly predicted ISPs. As expected, committed youths who were younger at the time of their arrival to the facility were more likely to receive ISPs. This finding is consistent with findings by Taylor and colleagues (2007) as well as past studies examining predictors of administrative

segregation in incarcerated adults (Lovell et. al., 2000; Motiuk & Blanchette, 1997; Thompson & Rubenfeld, 2013; Wichmann & Nefekh, 2001; Wichmann and Taylor, 2004) and predictors of institutional misconduct in committed youths (DeLisi et al, 2010b; McReynolds & Wasserman, 2008; Trulson, 2007). One explanation for why age at admission was found to significantly increase the risk of ISPs could be Moffitt's (1993) dual-taxonomy theory of life-course-persistent (LCP) and adolescent-limited (AL) trajectories of antisocial behavior. According to Moffitt (1993), LCP youths demonstrate a continuous course of antisocial behavior throughout their lifespan while AL youths demonstrate only temporary involvement in antisocial behavior during adolescence. Importantly, LCP youths exhibit more extreme and persistent antisocial behaviors, and these behaviors start in early childhood compared to the less severe and transient antisocial behaviors seen in AL youths that emerge later in development. It is possible that youths exhibiting such extreme conduct problems at a young age would more likely become involved in the juvenile justice system and be dispositioned to more restrictive residential placements as compared to youths who engage in more transient antisocial behaviors. Additionally, Moffitt posited that LCP youths exhibit conduct problems that tend to be inflexible and refractory to changing circumstances, indicating that these youths may continue to engage in rule violating behaviors despite their commitment to a juvenile facility and the negative consequences resulting from these behaviors (Moffitt, 1993). This may explain why younger youths in the facility continue to exhibit rule violating behaviors even after they are separated from the general population.

Another factor that may contribute to a greater number of ISPs for younger youths committed to residential facilities is their less developed prefrontal cortex as compared to

their older counterparts. The brain continues to gradually develop until approximately 25 years of age (Sowell et al., 1999) and the prefrontal cortex, which houses the neural circuitry underlying executive functions such as working memory, impulse control, planning, and flexible thinking is one of the last regions of the brain to mature (Johnson et. al, 2009). As a result, these younger youths are less capable of considering and anticipating the future consequences of their actions, which makes them more prone to making decisions that may be harmful to themselves and others (Scott and Steinberg, 2009). Importantly, these youths struggle to control their behavioral impulses, even when these behaviors have very negative consequences.

Another goal of the present study was to examine whether major rule violations were more predictive of ISPs compared to minor rule violations. As expected, our results revealed that major rule violations significantly predicted ISPs whereas minor rule violations did not. This finding was anticipated considering that in practice ISPs should only be reserved for behaviors that impede the rehabilitation process or place the perpetrating youths or their potential victims in serious risk of harm. As this study collapsed across several different forms of serious behaviors to calculate the major rule violations variable, future research should seek to further isolate what specific severe rule violating behaviors are most likely to lead to ISPs among committed youths.

Surprisingly, certain variables that have been shown to consistently predict ISPs or be highly correlated with ISPs in past studies using samples of justice-involved adults and youths (i.e., past offenses or arrests, length of commitment, anger/irritability) were not found to increase the risk of ISPs in the current study. This may be partially attributed to differences in how these variables were operationalized and measured across studies.

For example, length of commitment in the present study served as a proxy variable that was calculated using youths' projected date of discharge rather than their actual date of discharge. We were unable to use their actual date of discharge, as many youths were prematurely transferred to other facilities because of the current residential facility's closure, so it did not accurately represent the full length of their commitment. Further, our results may have been discrepant with the study by Taylor and colleagues (2007) as we focused on ISPs accrued during youths' initial adjustment to the facility rather than ISPs accrued for the entirety of the youths' commitment. Additionally, anger (as measured by the Anger-Irritable subscale of the MAYSI-2) was found to be highly correlated with ISPs in the study conducted by Butler and colleagues (2007) but anger/aggression (as measured by the APS and APS-SF) was not significantly predictive of ISPs in the current study. It may be that the larger number of variables examining externalizing behaviors (i.e., Anger/Aggression, ADHD, ODD, Conduct Disorder, total rule violations) in the current study attenuated the ability of Anger/Aggression to emerge as a unique predictor over and above these other variables. Lastly, the number of past offenses and number of past arrests have been shown to be predictive of institutional separation in committed youths and incarcerated adults, but total adjudicated offenses did not emerge as a significant predictor of ISPs in the current study. Prior studies have examined instances of institutional separation across the entirety of the commitment length whereas our study focused on institutional separation during youths' initial adjustment to a residential facility (i.e., first 14 weeks) suggesting that factors that lead to legal sanctions in the community may not be the same as factors that lead to higher-tiered sanctions in residential facilities when youths are first adjusting to their new

environment. Future studies should consider examining factors that are specific to secured residential facilities such as those outlined in the deprivation model of adjustment (e.g., security level, loss of familiar social support) when evaluating potential predictors of ISPs especially during the first few weeks of youths' commitment.

Limitations

One strength of the current study is that it is one of only three known studies to examine predictors of ISPs, an important indicator of institutional maladjustment, in a sample of committed youths. Importantly, the present study expanded upon the results of prior studies by exploring additional potential predictors of ISPs in this high-risk population. In lieu of this strength, there are some limitations of the present study that should be considered. As these data were archival, some variables that have been shown to predict segregation in closed custody facilities for adults and institutional misconduct in residential facilities for justice-involved youths (e.g., personality subtypes) could not be examined, as they were not available in our dataset. Additionally, the findings from the current study may not generalize to other populations of committed youths. Specifically, the current study's sample was solely comprised of a sample of adolescent males committed to a single maximum-security residential facility from one geographic region (i.e., the southeastern portion of the United States). Thus, findings from this study may not be applicable to adolescent females committed to residential facilities, youths committed to facilities in other geographic regions, or youths committed to lower-risk/secured facilities. It will be important to replicate the current study with a larger and more representative sample that better reflects all justice-involved youths and Department of Juvenile Justice (DJJ) facilities in the United States. An additional limitation of this

study is the manner in which rule violation data were obtained. These data were based on behavioral write-ups given to youths by staff after witnessing youths disobeying the rules of the facility. However, there may have been instances when staff did not record all behavioral violations due to them occurring in private quarters (e.g., the restroom), staff potentially showing favoritism to certain youths, or staff ignoring behaviors rather than dealing with the paperwork involved in issuing a behavioral write up.

Clinical Implications

The findings from the present study have important clinical implications that should be considered by the DJJ and by administrators and staff employed at juvenile justice facilities. The results from this study revealed that youths committed to residential facilities at a younger age and those exhibiting more frequent and serious rule violations within the facility are more likely than other youths to be separated from the general population. Thus, a crucial point of intervention for these younger youths is the moment they enter the juvenile justice system, as providing support early in the process may provide them with the necessary resources to potentially avoid more restrictive placements (i.e., secured residential facility). Interventions at this stage should focus on prevention of future antisocial behaviors by targeting the known causes of these behaviors in children and adolescents, which have been found to be multidetermined across youths' social ecology (Loeber et al., 1998). Specifically, factors at the individual, family, peer, school, and community level play a contributory role in the development and continuation of antisocial behaviors in youths and should be primary targets for interventions (Henggeler et al., 2009). One such intervention that targets these correlates of youth offending is Multisystemic Therapy (MTS), which is a family- and community-

based intervention that seeks to alter the life course of youths who exhibit serious antisocial behaviors and who are at-risk for out-of-home placements within the juvenile justice system (Henggeler et al., 2009). MTS has been shown to be effective in significantly improving youths' overall functioning, decreasing recidivism rates, limiting out-of-home placements, improving school attendance, and reducing substance use problems (Sawyer & Borduin, 2011; Stambaugh et al., 2007; Timmons-Mithcell et al., 2006; Weiss et al., 2013). MTS may be especially useful for youths who commit severe offences in late childhood and early adolescents. Thus, the use of intensive family- and community-based interventions that target correlates of youths' antisocial behaviors, such as MTS, at the onset of youths' contact with the juvenile justice system may prevent future antisocial behaviors and subsequent placements in secured residential facilities.

For youths' whose first offense results in being placed in a secured residential facility, the findings from this study may be helpful in guiding intervention planning both within the secured facility and post-release through the use of transition planning. With regard to interventions within the facility, a data-driven, prevention-oriented approach to behavior management, such as the Facility Wide Positive Behavior Interventions and Supports (FW-PBIS) model, has been shown to be an effective strategy to deter serious behavioral problems in younger youths, decrease the number of rule violations enacted within the facility, and aid with youths' initial adjustment (Fernandez et al., 2015a; Fernandez et al., 2015b; Gagnon et al., 2018; Johnson et. al., 2013; Lopez et al., 2015). FW-PBIS is a three-tiered system where Tier I supports are facility-wide supports provided to all youths, Tier II supports are targeted supports provided to youths who display behavioral problems or skills deficits, and Tier III supports are intensive

interventions provided to youths with severe behavioral problems (Jolivette et al., 2016; Jolivette et al., 2020). The residential facility from which the current study's data was gathered used a token economy to address rule abiding and rule violating behaviors. However, the data collected from this system was never revisited to make system adjustments at an institutional or individual level. In contrast, within a FW-PBIS model, these data go on to inform the intensity and dosage of intervention that each youth receives within the facility (Jolivette et al., 2020). The Georgia DJJ is an example of an agency that successfully shifted from a token economy to a FW-PBIS model, which led to a decrease in daily rule violations and the elimination of ISP as a behavioral management tool, especially after facility staff implemented higher-tiered supports (e.g., de-escalation strategies, functional behavioral assessments) when working with youths (Fernandez et al., 2015a). In addition to supporting committed youths using a multi-tiered approach to behavior management, efforts should also aim to reduce subsequent re-entry into these facilities upon release through the use of quality transition planning. Transition planning involves the coordination of activities and services as youths transition from their home to a residential facility and then from the facility back to their community (Griller Clark, 2006). A key component of successful transition programs involves the identification of a transition specialist, which is an identified person who serves as the point-of-contact for justice-involved youths and their family and provides continuity of care across agency transitions (Johnson et al., 2017). Indeed, youths' involvement in school, work, and community services (e.g., mental health services, social services) shortly after release from a juvenile residential facility is associated with better community adjustment and lower levels of recidivism (Bullis et al., 2004). Thus, the use

of multi-tiered support systems within secured facilities and quality transition planning from entry into the facility to post-release may allow for better adjustment throughout the duration of committed youths' involvement with the juvenile justice system.

Future Directions

The results of the present study highlight the need for future studies to replicate these findings and to examine additional variables that have been found to predict ISPs in incarcerated adults that could not be examined in this study (e.g., security level of the facility). Additionally, future studies should examine what specific major rule violations within residential facilities are more likely to lead to ISPs over others. In the current study's archival dataset, specific rule violations were not able to be directly tied to ISPs, as a large percentage of the data did not specify why an ISP was given. This information would allow for further tailoring of individual services to committed youths within the facility. Finally, it may be of interest to examine what factors predict length of stay in ISP, as this decision ideally should be data-driven.

Conclusion

Developing a more thorough understanding of the factors that place committed youths at risk of separation from the general population allows for a better understanding of how to develop or augment existing interventions for these youths so they can avoid the negative consequences associated with ISPs. The results of the current study revealed that youths admitted to residential facilities at a younger age and youths who exhibit more frequent and severe rule violations within the facility are at greater risk for institutional maladjustment and subsequent ISPs. Results of the current study should be replicated in a larger more representative sample of justice-involved youths committed to

residential placements to bolster the confidence in our findings. However, our results do suggest that youths who commit criminal offenses early in development should be referred to family-involved and community-based interventions (e.g., MST) rather than more restrictive alternatives and for those youths whose first offense(s) necessitate placement in secured residential facilities, multi-tiered systems of support are recommended. Further, high-quality transition planning is needed as soon as youths become involved in the juvenile justice system to assist with their re-entry to the community and to prevent future commitments to residential facilities.

APPENDIX A TABLES

Table A1.

List of Predictors of ISP, Adult Segregation, Rule Violations in Committed Youths, and Overlapping Variables

Predictors of ISPs in Committed Youths	**Predictors of Segregation in Adults**	**Predictors of Rule Violations in Youths**	**Predictors available for current study**
Age at admission	Age at admission	Age at admission	Age at admission
Length of commitment	Length of sentence	Length of commitment	Length of commitment
Total number of arrests	Number of past offenses/ Number of past violent offenses	Number of past offenses/Number of past violent offenses	Total adjudicated offenses
Anger/irritability	Higher rates of serious mental illness	Externalizing symptoms/internalizing symptoms/trauma-related symptoms	Externalizing symptoms (i.e., symptoms of CD, ODD, ADHD, substance abuse, and anger/aggression)
Impulsive/reactive subtype of MACI	History of prior segregation	Positive attitudes toward aggression	Internalizing symptoms (i.e., depression, anxiety)
Psychopathy subtype of MACI	Greater number of rule violations	Gender	Trauma-related symptoms (i.e., symptoms of PTSD, history of abuse)
	Gang affiliation	Gang affiliation	Gang membership
	Higher risk of reoffending upon release	Higher level of institutional security	Total number of rule violations
	Higher level of institutional supervision	Race	Race
	More criminogenic needs		
	Variability of committing offense		

Note. MACI = Millon Adolescent Clinical Inventory; CD = Conduct Disorder; ODD = Oppositional Defiant Disorder; ADHD = Attention-Deficit/Hyperactivity Disorder, PTSD = Post-Traumatic Stress Disorder

Table A2.

Rule Violation Categories and Examples of Coded Behaviors

Disruptive Behavior	**Disrespectful Behavior**	**Destructive Behavior**
Excessive Horseplay (play fighting) Excessive noise/yelling Excessive talking in classroom/dining hall/cottage Disruptive behavior/agitation of others (peers) Trying to get other youth to misbehave/act out No self-control Negative attitude and behavior Gets angry when given instructions/no anger control	Calling staff names (not using profanity) Sitting in staff's chair/getting in staff's personal space Taking something from staff Touching staff in nonaggressive manner Yelling out to visitors/calling out to staff Tearing up/throwing out/not signing write-up Lying to staff Threatening to make false abuse report Agitation of staff/teachers	Attempted arson Destroying state property Throwing objects (trash cans, desks, chairs) Kicking/slamming doors Damage to property Ripping up textbooks/schoolwork Destruction of state property – write-up
Verbal Aggression	**Physical Aggression**	**Threatening Behavior**
Profanity w/o qualifier Gross profanity directed to staff/peers Attempting to get staff/peers into altercation Arguing/yelling at staff/peers	Fighting other youth Harm to others Hitting/kicking/biting staff or peer Trying to provoke others into physical altercation Throwing objects intentionally at others	Threatening staff/peers Getting in staffs face/yelling in staffs face Pointing finger in staffs face Possession of weapon Gang evidence (gang contraband/gang signs)
Noncompliance	**Sexual Behavior**	**Self-Harm**
Noncompliance/does what he wants Not following staff directives Not following program rules Stealing/trading food Contraband (e.g., food in room, pencils) Incomplete activity/Off-task behavior Refusing school, assignment, group, details Off bounds/leaving classroom/fleeing to another cottage	Sex play Indecent exposure (hands in pants, sagging pants with buttocks exposed) Sexual misbehavior Saying something sexual in nature to staff/peers Sexual gestures	Harm to self (e.g., banging head, scratching/ hitting/biting self) Suicide attempts Suicide gestures Verbalizing intentions to hurt oneself
Attempted Escape	**Other rule violations (no qualifiers)**	**ISP**
Attempted escape Running through/towards gates Climbing over fence Leaving confines of facility	No leadership skills Poor interaction with others/not helping others Cheating on a test Bad decision making	Intensive Supervision Placement

Table A3.

Descriptive Statistics and Correlations of Study Variables

Variables	1	2	3	4	5	6	7	8
1. Sum of ISPs	--							
2. Age at Admission	-.26**	--						
3. Race	.12	.06	--					
4. Gang Membership	.12	-.23*	.01	--				
5. Adjudicated Offenses	.08	.03	-.13	-.14	--			
6. Rule violations	.48**	-28**	.24*	.21*	.01	--		
7. Conduct Disorder	.15	-.32**	.09	.18*	.00	.21*	--	
8. ODD	-.01	-.28**	.06	.06	.-.04	.13	.61**	--
9. ADHD	.07	-.21*	.09	.06	-.04	.09	.45**	.70**
10. Substance Abuse	.16	-.15	-.19*	.14	-.03	.16	.41**	.31**
11.Anger/Aggression	.05	-.29**	.13	.21*	-.01	.18	.58**	.75**
12. Depression	-.17	-.16	.00	.06	-.16	-.01	.09	.33**
13. GAD	-.02	-.18	.10	.10	-.07	.02	.26**	.53**
14. PTSD	-.05	-.14	.09	.20*	-.14	.03	.18	.40*
15. History of Abuse	.13	-.02	-.16	.03	-.00	.07	.07	.10
16. Commitment Length	-.12	-.16	.21*	-.08	-.10	-.03	-.01	.07
Mean (SD)	2.52 (2.90)	16.54 (1.01)	-	-	9.70 (8.46)	64.76 (61.27)	59.59 (12.16)	50.32 (9.25)
Range	0-16	14-18	-	-	0-48	0-305	39-94	33-83

Note. ODD = Oppositional Defiant Disorder; ISP = Intensive Supervision Placement; ADHD = Attention-Deficit/Hyperactivity Disorder; GAD = Generalized Anxiety Disorder; PTSD = Post-Traumatic Stress Disorder
* $p < .05$, ** $p < .001$.

Table A3 Continued

Descriptive Statistics and Correlations of Study Variables

Variables	9	10	11	12	13	14	15	16
1. Sum of ISPs								
2. Age at Admission								
3. Race								
4. Gang Membership								
5. Adjudicated Offenses								
6. Rule violations								
7. Conduct Disorder								
8. ODD								
9. ADHD	--							
10. Substance Abuse	.25**	--						
11.Anger/Aggression	.47**	.26**	--					
12. Depression	.48**	.06	.40**	--				
13. GAD	.65**	.12	.52**	.71**	--			
14. PTSD	.51**	.06	.51**	.76**	.81**	--		
15. History of Abuse	.09	.08	.16	.03	.09	.12	--	
16. Commitment Length	.09	-.12	.16	.22*	.11	.13	-.15	--
Mean (SD)	52.66 (10.15)	56.10 (11.64)	52.10 (10.15)	53.03 (10.38)	53.34 (10.30)	57.60 (11.20)	-	10.47 (3.64)
Range	33-84	44-84	36-82	38-79	37-79	37-86	-	3-30

Note. ODD = Oppositional Defiant Disorder; ISP = Intensive Supervision Placement; ADHD = Attention-Deficit/Hyperactivity Disorder; GAD = Generalized Anxiety Disorder; PTSD = Post-Traumatic Stress Disorder
* $p < .05$, ** $p < .001$.

Table A4.

Model Examining Predictors of Intensive Supervision Placements

Variable	β	SE	IRR	95% CI
Age at Admission	**-.29**	**.14**	**.75***	**-.55 – -.02**
Race	.19	.33	1.21	-.42 – .81
Gang Membership	-.44	.38	.64	-1.16 – .27
Total Adjudicated Offenses	.001	.02	1.00	-.03 – .03
Rule Violations	**.01**	**.002**	**1.01****	**.004 – .015**
Conduct Disorder	.001	.02	1.00	-.03 – .03
Oppositional Defiant Disorder	-.04	.03	.96	-.10 – .01
Attention-Deficit/Hyperactivity Disorder	.03	.02	1.03	-.01 – .07
Substance Abuse	-.01	.01	.99	-.03 – .02
Anger/Violence Proneness	.03	.02	1.03	-.02 – .07
Major Depression	-.03	.02	.97	-.07 – .01
Generalized Anxiety Disorder	.04	.03	1.04	-.01 – .10
Post-Traumatic Stress Disorder	-.02	.02	.98	-.10 – .02
History of Abuse	.36	.30	1.43	-.21 – .92
Commitment Length	-.04	.05	.96	-.13 – .05

Note. B(SE) = Coefficient (standard error) for predicting the dependent variable from each independent variable; IRR = Incident rate ratio; 95% CI = 95% Confidence interval for each IRR.
* p <.05, ** p <.001

APPENDIX B –IRB Approval Letter

Office *of*
Research Integrity

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB-21-157
PROJECT TITLE: Predictors of Intensive supervision placement among committed youths within a maximum-security residential facility
SCHOOL/PROGRAM: Psychology
RESEARCHER(S): Tiffany Harris, Stephanie Smith
IRB COMMITTEE ACTION: Exempt
CATEGORY: Exempt
APPROVED STARTING: May 19, 2021

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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