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Racialized Gender Differences in Mental Health Service Use, Adverse Childhood Experiences, and Recidivism Among Justice-Involved African American Youth

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Abstract
This study examines the racialized gender differences of mental health service use, Adverse Childhood Experiences (ACEs), and recidivism for justice-involved African American youth. Analyses were based on the Northwestern Juvenile Project Study, the first prospective longitudinal study that explores the mental health and substance use disorders and needs among a juvenile justice-involved population. Findings indicate that justice-involved African American girls were significantly more likely to receive mental health services at Follow-up 1 compared to boys and have a higher number of cumulative ACEs compared to boys at baseline. African American girls who received mental health services were more likely to be re-arrested compared to African American boys over time. We advocate for culturally responsive and gender responsive services to reduce recidivism among justice-involved African American youth. Furthermore, it is important to recognize bias within the juvenile justice system that may hinder positive outcomes for youth. Implications for practice and policy are discussed.

Keywords African American youth · Gender differences · Mental health treatment · Adverse Childhood Experiences · Recidivism

Introduction

This study aims to examine the racialized gendered differences in mental health service utilization and its correlation with future recidivism among African American youth with a history of justice involvement. First, understanding the context of justice involvement for African American youth with mental illnesses and experiences with trauma is explored. After an overview of the detrimental relationship African Americans face in relation to the justice system, we will discuss trauma, Adverse Childhood Experiences (ACEs), recidivism, gender differences, and the importance of recognizing multiple identities in treatment for system-involved youth. Finally, we investigate whether mental health service use reduces the likelihood of future recidivism and whether this relationship differs by gender for African American youth.

African American Youth and the Juvenile Justice System

African American youth with mental illnesses are widely overrepresented in the juvenile justice system (Hockenberry & Puzzanchera, 2017; Office of Juvenile Justice & Delinquency Prevention, 2019). Contact with the justice system itself is often a traumatic experience for African American youth. Contact with the police, the courts, detainment, and after care can all perpetuate trauma on youth of color due to the systematic racial injustices pervasive within the juvenile justice system (Crable et al., 2013; Crosby, 2016; Kerig, 2018). Moreover, involvement with the juvenile justice system increases the likelihood of involvement in the adult criminal justice system (Johnson, 2004). Justice system involvement has devastating effects on African American families and communities as the formerly incarcerated consistently face discrimination in employment, housing,

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and large-scale disenfranchisement (Alexander, 2010). For these reasons, it is essential to identify interventions and practices that promote positive developmental outcomes for justice-involved African American youth that may reduce the likelihood of continuing to the adult criminal justice system (Williams et al., 2017).

Trauma, ACEs, Mental Health Service Use and Recidivism

Relevant particularly for African American youth in the general population, racial discrimination, institutional racism, and cultural racism are linked to higher rates of depression, anxiety, and psychiatric illness (Lewis et al., 2015; Williams & Mohammed, 2013). Experiences of interpersonal and institutional racism and discrimination are traumatic within themselves and substantial barriers to the health and well-being of all African Americans (Hope et al., 2015). The Substance Abuse and Mental Health Services Administration (SAMHSA) defines trauma as an event or series of events experienced or witnessed that is perceived as physically or emotionally harmful or life-threatening with lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being (SAMHSA, 2014). The impact of trauma can extend beyond individuals who witness or experience trauma via victimization to influence community norms and increase negative developmental outcomes such as violence and criminal acts throughout a community (Ullman et al., 2013).

Justice-involved youth experience rates of victimization that are about two times higher than youth in the general population (Coleman, 2005; Coleman & Stewart, 2010), and between 40 and 60% of youth with adjudicated cases have histories of victimization (Ford et al., 2007; Stahl, 2006). One study found that up to 90% of justice-involved youth reported exposure to at least one type of traumatic event (Dierkhising et al., 2013). Charak et al. (2019) found that nearly 93% of youth in a juvenile justice sample reported at least four or more incidents of different types of trauma. Some scholars argue that the relationship between the juvenile justice system and youth behavioral health problems is likely bidirectional, as merely having contact with the justice system can be a form of trauma (Voisin et al., 2017).

Though there is some overlap between trauma and ACEs, they are not one and the same. Trauma may occur at any time within an individual's life. ACEs occur during a time-specific period. ACEs assess an individual's prior experience in 10 key areas during the first 18 years of life including abuse (physical, sexual, and emotional), neglect (physical and emotional), and household dysfunction (the experience of having a battered mother, parental abandonment, or having had a household member who abuses substances, struggles with mental illness, or has experiences with incarceration) (Anda et al., 1999). Youth with ACEs often suffer from traumatic stress, which interrupts a child's development and affects functional changes in brain development (Cicchetti, 2013; Danese & McEwen, 2012). Studies have found that youth in the juvenile justice system are roughly three to eight times more likely to have experience with ACEs compared to youth in the general population (Abram et al., 2004; Baglivio et al., 2014; Dierkhising et al., 2013). ACEs are also associated with lower global functioning among justice-involved youth over time (Duron et al., 2021). Throughout this paper trauma will be used to signify any distressing event experienced or witnessed throughout the lifespan, while ACEs will refer specifically to the items identified above and witnessed or experienced during the first 18 years of life. For example, in the case of child abuse and neglect, some acts may be considered ACEs and others not, but most cases of child abuse and neglect are experienced as traumatic and may increase the likelihood of later arrests, both as a juvenile and adult (Ryan et al., 2011, 2013). It is for this reason that interventions and practices that promote positive developmental outcomes for justice-involved African American youth must be identified.

Regarding recidivism specifically, mental health service use has been found to reduce the risk of later justice involvement (Foster et al., 2004). Zeola et al. (2017) suggest that mental health care likely reduces recidivism by addressing the unmet psychological needs of youth, lowering the levels of stress, shame, and anger from legal involvement, and addressing other behaviors that correlate with recidivism. Mental health service use can be especially effective when paired with targeted interventions to address the criminogenic risk factors of youth including antisocial attitudes, history of antisocial behavior, and negative peer influence. Mental health service use increases the likelihood that criminogenic needs will be addressed (McCormick et al., 2016). The high prevalence of many mental health disorders within the juvenile justice system underscores the need for different mental health care levels with varying treatment options (Underwood & Washington, 2016).

However, the findings of Choi et al. (2018) suggest that African American justice-involved youth are more likely to be under-identified as in need of services for traumatic stress compared to white and Latinx youth. Mental health service use has been found to decrease the likelihood of future delinquent acts among African American youth in other publicly funded systems of care (Garcia et al., 2015). However, these youth generally have lower overall rates of mental health service use than white youth in other publicly funded systems of care (McMillen et al., 2004). Further, participation in a mental health intervention for youth offenders was strongly associated with reduced recidivism, compared with nonparticipants in the program (Jeong et al., 2014). As a result, increasing access to mental health services, specifically for

justice-involved African American youth, may be critical in promoting the positive developmental outcome of reducing recidivism.

There is an abundance of literature which focuses on the relationship between ACEs specifically and recidivism (Craig et al., 2020; Guarnaccia et al., 2020; Kowalski, 2019; Mason, 2020; Wolff et al., 2017). However, none of this literature focuses specifically on African American youth. This literature also does not often focus on gender or racialized gender differences for African American youth. This study fills this gap in the literature. Next, we will discuss the importance of gender in these relationships.

Gender in the Juvenile Justice System

Girls and boys often differ in the traumatic experiences that bring them to the attention of the juvenile justice system at first contact. Girls are more likely to have a higher incidence of trauma (Baglivio et al., 2014) and higher rates of mental health disorders (Teplin et al., 2013) than boys. Girls in the juvenile justice system are much more likely to come from family constellations where sexual, physical, and emotional abuse occur in the home compared to boys (Charak et al., 2019; Chesney-Lind & Pasko, 2004; Miller, 2008; Pereda et al., 2017). In one study conducted in four California detention centers, 56% of girls had been sexually assaulted and 92% had suffered some form of child maltreatment (Acoca & Dedel, 1998).

Though girls share some of the same risk factors for delinquency as boys, these risk factors often manifest differently (Lee & Villagrana, 2015). For example, girls involved in the juvenile justice system are more likely to have chronic mental and physical health disorders, substance use, and academic disruptions than boys (Chesney-Lind et al., 2008). However, recent studies suggest that justice-involved girls and boys may be similar regarding certain risk factors related to romantic relationships with much older partners and histories of self-harm (Horan & Widom, 2015; Kerig & Becker, 2015; Malvaso et al., 2016). Nevertheless, Pierce and Jones (2021) recently found that the number of ACEs are significantly related to delinquency for girls, but not for boys. Conversely, Leban and Gibson (2020) found that ACEs were significantly associated with delinquency for boys, but not girls. Clearly, the question of gender differences is still not settled in the literature.

Further, little research examines the role that racialized gender differences play in juvenile justice involvement at large and specifically regarding mental health service use and later recidivism. Some scholars have assessed the mental health service use of detained youth (Aalsma et al., 2015; White et al., 2016), but there is a dearth of research seeking to identify mental health service use as a promotive factor for this population. Given that African American youth and girls with mental illnesses are overrepresented in the juvenile justice system, it is necessary to identify promotive factors for this group and within-group gender differences using an intersectional lens examining the influence of racialized gender differences for both girls and boys. This study seeks to close that gap in the literature.

The Importance of Multiple Identities Within the Juvenile Justice System

African Americans in general, and girls generally, are more likely to have mental health disorders in the juvenile justice system; however, few studies examine the impact of mental health services on African American girls in the juvenile justice system. As a result, it is important to take an intersectional approach regarding mental health service use and its impact on both justice-involved African American girls and boys. Following multiple waves of conceptualization, Crenshaw (1989) formally coined the term *intersectionality* to describe the multiple oppressions that black women face in society related not only to race, but also gender. This oppression is unique compared to black men and white women, who both hold privileges related to gender and race, respectively (Beal, 2008). Potter (2015) indicates the necessity of considering the multiplicative effects of several identities on the lives of justice-involved individuals. Further, Crenshaw (2012) has criticized mass incarceration's central focus on race, which rarely addresses the unique needs of women and girls, and the often race-neutral gender-responsive interventions and policies that rarely reflect the role of race and social control.

An intersectional approach provides a useful framework to assess the impact of multiple identities and experiences with crime-related issues (Owen et al., 2017). Different aspects of an individual's identity must be considered along with other salient factors to understand one's involvement with the juvenile/criminal justice system (De La Rue & Ortega, 2019). Within the context of the current study, we seek to examine the racialized gender differences regarding trauma, mental health service use, and later recidivism among African American justice-involved youth.

The Current Study

This study aims to examine the racialized and gendered differences in mental health service utilization and its impact on reducing future recidivism among African American youth with a history of justice involvement. We hypothesize that African American youth who receive mental health services will be less likely to be re-arrested longitudinally at the Time 1 Follow-up (Foster et al., 2004). We also hypothesize that girls will have different mental health services outcomes than boys because of

their higher rates of trauma exposure in general, including ACEs, and psychiatric diagnoses (Baglivio et al., 2014; Teplin et al., 2013).

Methods

Data

Data for this study are derived from the Northwestern Juvenile Project (NJP), a prospective longitudinal study of the mental health needs and outcomes of juvenile detainees. The NJP enrolled 1829 adolescents aged 10–18 who were first arrested and detained at the Cook County Juvenile Temporary Detention Center (CCJTDC) between 1995 and 1998 in Cook County, IL, which includes Chicago and its nearby suburbs. Each participant completed their second assessment during a 4-year period between 1998 and 2001, whether they were incarcerated or back within the community. The time period between the first and second assessments varied for each youth. The participants have been engaged with the study for over a decade, and at present, have completed more than a dozen follow-up interviews. The CCJTDC population is demographically similar to other United States juvenile detention centers, in that most detainees are racial/ethnic minorities, majority male, and the age distribution is typical of juvenile detainees (Abram et al., 2008) though girls are the fastest-growing group (Kerig, 2018; Tam et al., 2019). Normalized sampling weights were used for baseline variables in the study based on the original 1829 participants in the overall sampling strata. Sampling weights were also used for Follow-Up 1 to make adjustments for nonresponse (e.g., withdrew, died) at Follow-up 1 as specified in the User's Guide to the Northwestern Juvenile Project Baseline through the 4th Follow Up Interview Guide (Jakubowksi et al., 2016).

Participants

This study uses the NJP dataset from the baseline wave and Follow-Up 1 wave. The original full sample is 1829. The present study sample comprises only African American youth who completed the Follow-Up 1 interview within the planned timeframe (up to 4 years after their study enrollment date). Selecting out for African American youth only reduced the sample to 1005. Individuals with missing data on one or more variables used in the analysis were removed via list-wise deletion. Sensitivity analyses were conducted and determined that the missing values were missing at random. As a result, the final analytic sample is 970 participants with 550 males (56.7%) and 420 females (43.3%).

Measures

Mental Health Services Utilization

The Child and Adolescent Services Assessment–Modified instrument was used to measure mental health service use (Teplin, 2018). This measure is a self-report tool designed to measure service use among children and adolescents ages 8–18 (Ascher et al., 1996). Mental health services assessed include those provided in various sectors such as schools, social service agencies, correctional facilities, hospitals, treatment centers, and informal settings. The present study focuses on a subset of services delivered in school, inpatient, and outpatient services. For each service type, participants were asked if they received the service at any time since the baseline interview. School mental health services included special education classes for learning and emotional/behavioral problems, drug/alcohol, or other mental health needs. Inpatient mental health services included services received while staying overnight at a facility for help with emotional, behavioral, or substance-related problems. Respondents were asked about inpatient settings, including hospital, residential treatment, group home, and detention center. Outpatient mental health services include those received in 13 parameters such as outpatient mental health clinic, day treatment program, drug/alcohol treatment program, family doctor, and emergency department. Appendix 1 lists each mental health service used to create the mental health services variable.

Re-arrest

Re-arrest is the primary dependent variable of this study. Self-reported arrests since the last interview were measured in the arrest and violence subsection of the Risky Behavior Assessment Profile (Teplin et al., 2013). A dichotomous variable was used to indicate whether a respondent was arrested since the last interview. A value of one indicates the respondents who reported any arrest since the last interview.

Mental Health Diagnosis at Baseline

The mental health diagnosis variable was created to measure youth responses in the affirmative to any mental health or substance abuse disorder diagnosis as indicated by the Diagnostic and Statistical Manual of Mental Disorders, Version 3, Revised and Diagnostic Interview Schedule for Children, Version 2.3. All mental health and substance use disorders can be found in Appendix 2. Mental health diagnosis is operationalized as including any variables noted in Appendix 2.

Substance Use at Baseline

The Child and Adolescent Functional Assessment Scale was used to determine substance use at baseline (Teplin, 2018). The items that made up the substance use variable can be found in Appendix 3. Substance use is operationalized as being made up of the variables noted in Appendix 3.

Cumulative ACEs Score

The cumulative ACEs score for each youth was comprised by adding together each of the seven ACEs available within this dataset, which includes: emotional abuse, physical abuse, sexual abuse, household incarceration, household mental illness, household substance abuse, and intimate partner violence toward the youth's mother.

Age

The range in age for the study is measured in years and differs for the baseline age and the Follow-Up 1 age. The baseline age range is 10–18 years old. The Follow-Up 1 age range is 13–25 years old.

Incarcerated Since Baseline

Incarceration at Follow-Up 1 is a dichotomized variable which indicates whether the youth experienced any incarceration since the baseline interview. A value of one indicates the respondent reported any incarceration since the last interview.

Days Incarcerated Since Baseline

This measure is a self-reported count of the number of days a youth had been incarcerated since baseline. There is a great range in the number of days youth were incarcerated since baseline. Overall, for girls and boys, the average days incarcerated range is from 0 to 1473. For girls, the average range of incarcerated days was 0–1119. For boys, the range of incarcerated days was 0–1437. This indicates that some youth may never have been incarcerated from baseline to Follow-Up 1, while some youth may have been incarcerated the entire period from baseline to Follow-Up 1.

Analytic Approach

Frequencies were conducted to determine the number of youth who received mental health services as well as other variables that may influence the relationship between mental health service use and later recidivism which include: mental health diagnosis, substance use diagnosis, incarceration since baseline, re-arrest since baseline, average days incarcerated, time between baseline and Follow-Up 1, and age at baseline and age at Follow-Up 1. Chi square and *t* tests were conducted to determine whether there was a significant different between girls and boys and these variables.

As we discovered significant gender differences, we utilized logistic regression to examine the relationship between mental health service use and re-arrest at first Follow-Up assessment for both girls and boys in two separate models. Splitting the sample into separate models by gender is an established practice in examining gender differences and widely supported within the literature (Kowalski, 2019; Leban & Gibson, 2020; Williams-Butler et al., 2019). In the first regression model (Service Use Model), only mental health service use was included in the model to understand the relationship between mental health service use and re-arrest. In the second regression model (Person Level Model), in addition to mental health service use, additional variables of mental health diagnosis, substance use, cumulative ACEs score, and age were included to understand the relationship between individual variables and service use. In the third regression model (System Level Model), in addition to mental health service use, mental health diagnosis, substance use, cumulative ACEs score, and age, additional variables of incarcerated at Follow-Up 1 and days incarcerated since baseline were included in the model to understand the role of system level variables. We use models focusing on personal and system level factors because the influence of individual and contextual-level factors are both important in advancing research that seeks to identify strengths in marginalized at-risk youth (Masten, 2007). All analyses were completed using STATA version 15.

Results

Descriptive Statistics

Demographic information and chi-square significance tests are presented in Table 1. The overall average age for all youth at baseline is 14.71 years old, with an average age of 14.98 years for girls and 14.51 years for boys. At Follow-Up 1, the average age for all youth is 18.05 years old, with an average age of 18.27 years for girls and 17.89 years for boys. Girls were significantly older than boys at baseline ($F = 27.43$, $p < .001$) and Follow-Up 1 ($F = 14.35$, $p < .001$). Girls were significantly more likely to use mental health services at Follow-Up 1 (62.7%) compared to boys (47.8%), χ^2 (1, 965) = 14.04, $p < 0.01$. Girls were more likely to have had a mental health diagnosis (77.1%) compared to boys (67.1%).

Regarding the system level variables, boys had significantly worse outcomes. Boys were more likely to be

Table 1 Descriptive statistics

	Overall *N* (%)	Overall *N* (SD)	Girls *N* (%)	Boys *N* (%)
	970 (100)		420 (43.3)	550 (56.7)
Age at baseline***		14.71 (1.41)	14.98 (1.12)	14.51 (1.56)
Age at follow-up 1***		18.05 (1.56)	18.27 (1.30)	17.89 (1.71)
Mental health services since baseline***	527 (54.30)		264 (62.90)	263 (47.80)
Mental health diagnosis at baseline**	693 (71.40)		324 (77.10)	369 (67.10)
Substance use diagnosis at baseline	427 (44.00)		182 (43.30)	245 (44.60)
Incarcerated since baseline***	311 (32.10)		34 (8.10)	277 (50.36)
Average days incarcerated since baseline***		330.75 (353.19)	134.72 (222.30)	480.31 (361.62)
Re-arrest since baseline***	656 (67.60)		223 (53.10)	433 (78.73)
Gap year between baseline and first wave		3.28 (0.70)	3.25 (0.72)	3.31 (0.69)

***$p < .001$, **$p < .01$, *$p < .05$, $^{\dagger}p < .10$

incarcerated since baseline, χ^2 (1, 965) = 6.45, $p < 0.01$, have longer average days incarcerated ($F = 296.96$, $p < .001$), and were more likely to be re-arrested since baseline, χ^2 (1, 965) = 76.27, $p < 0.01$. It is important to note the wide range between days incarcerated for youth in the study previously noted in the measures section. Overall, for girls and boys, the average days incarcerated range is from 0 to 1473. For girls, the average range of incarcerated days was 0–1119. For boys, the range of incarcerated days was 0–1437. This indicates that some youth may never have been incarcerated from baseline to Follow-Up 1, while some youth may have been incarcerated the entire period from baseline to Follow-Up 1. Finally, the average time between assessments was 3.28 years, with a range of 7 years. There were no significant differences between girls and boys for the time between assessments ($F = 1.45$, $p = .23$).

Table 2 shows the baseline descriptive results of the participant's ACEs score and significance testing regarding gender differences. The range of overall ACEs score is from 0 to 7. Girls, on average, had higher cumulative ACEs scores than boys ($F = 8.99$, $p < 0.01$) at baseline. Girls were also significantly higher on cumulative ACEs regarding sexual abuse χ^2 (1, 965) = 17.82, $p < 0.001$, and intimate partner violence toward mother χ^2 (1, 965) = 8.29, $p < 0.01$.

Multivariate Statistics

Table 3 displays the results of regression models predicting re-arrest for girls. A hazard ratio of more than 1 indicates the increased likelihood of re-arrest and a hazard ratio of less than 1 indicates the decreased likelihood of recidivism. If 1 is subtracted by the hazard ratio and multiplied by 100, the resultant is equal to the percentage change in the hazard of re-arrest. In the Service Use Model, we see that mental health service use significantly predicted re-arrest for girls at follow-up 1 ($\beta = .40$, $p < .01$). Girls who received mental health services were 50% more likely to be re-arrested in the Service Use Model. In the second model, including person level variables, mental health service also predicted the increased likelihood of re-arrest for girls ($\beta = .32$, $p < .05$), as well as age ($\beta = -.28$, $p < .001$). Girls who received mental health services were 38% more likely to be re-arrested. Older

Table 2 Baseline adverse childhood experiences (ACEs) (unweighted)

	Overall *N* (%)	Girls *N* (%)	Boys *N* (%)
Cumulative ACEs score (0–7)*	3.00	3.19	2.85
Emotional abuse	582 (60.00)	262 (62.38)	320 (58.18)
Physical abuse	827 (85.26)	355 (84.52)	472 (85.82)
Sexual abuse**	151 (15.57)	89 (21.19)	62 (11.27)
Household incarceration	314 (32.37)	146 (34.76)	168 (30.55)
Household mental illness	530 (54.64)	249 (59.29)	281 (51.09)
Household substance abuse	156 (16.08)	66 (15.71)	90 (16.36)
Intimate partner violence toward mother*	348 (35.88)	172 (40.95)	176 (32.00)

Only 7 ACEs were calculated based on variables available in the NJP dataset

***$p < .001$, **$p < .01$, *$p < .05$

Table 3 Logistic regression of mental health services predicting likelihood of re-arrest for girls

Independent variables	Girls					
	Service use model		Person level model		System level model	
	B (SE)	Exp (β)	*B* (SE)	Exp (β)	*B* (SE)	Exp (β)
Mental health service use	0.40 (0.14)**	1.50	0.32 (0.14)*	1.38	0.29 (0.14)*	1.36
Mental health diagnosis			0.24 (0.19)	1.28	0.21 (0.19)	1.23
Substance use			0.28 (0.16)	1.32	0.29 (0.16)	1.34
Cumulative ACEs score			0.07 (0.04)	1.07	0.07 (0.04)	1.07
Age			−0.28 (0.06)***	0.75	−0.28 (0.06)***	0.76
Incarcerated at follow-up 1					0.65 (0.33)	1.91
Days incarcerated since baseline					0.01 (0.01)	1.00
Constant	−0.13 (0.11)	0.88	3.63 (0.94)***	37.68	3.49 (0.95)***	32.75
Observations (*N* for each model)	420		420		420	
R^2	0.0069		0.031		0.039	

***$p < .001$, **$p < .01$, *$p < .05$

youth were 25% times less likely to be re-arrested in the Person Level Model. In the System Level Model, including the mental health service use variable, person level variables, and system level variables, mental health service use ($\beta = .29$, $p < .05$) and age ($\beta = -.28$, $p < .001$) were the only significant predictors of later re-arrest. Girls who used mental health services were 36% more likely to be re-arrested. Older girls were 24% less likely to be re-arrested.

Table 4 displays the results of regression models predicting re-arrest for boys. In the Service Use Model, receiving mental health services did not significantly predict re-arrest for boys ($\beta = -.01$, $p = .853$). Further, in the Person Level Model, mental health service use also did not significantly predict re-arrest for boys ($\beta = -.10$, $p = .058$). Having a mental health diagnosis ($\beta = -.85$, $p < .001$) reduced the likelihood of re-arrest by 57%. Using substances ($\beta = -.36$, $p < .001$) decreased the likelihood of re-arrest by 30%. A higher ACEs score ($\beta = .20$, $p < .001$) predicted an increased likelihood of re-arrest by 23%. Older boys ($\beta = .08$, $p < .001$) were also more likely to be re-arrested by 8%. In the System Level Model, including the mental health service use, person level, and system level variables, mental health service use was the only non-significant predictor ($\beta = -.08$, $p = .141$). Youth who had a mental health diagnosis ($\beta = -.88$, $p < .001$), used substances ($\beta = -.33$, $p < .001$), and had fewer days incarcerated since baseline ($\beta = -.01$, $p < .05$) were 59%, 28%, and 1% less likely to be re-arrested, respectively. Having a higher cumulative ACEs score ($\beta = .17$, $p < .001$) and

Table 4 Logistic regression of mental health services predicting likelihood of re-arrest for boys

Independent variables	Boys					
	Service use model		Person level model		System level model	
	B (SE)	Exp (β)	*B* (SE)	Exp (β)	*B* (SE)	Exp (β)
Mental health service use	−0.01 (0.05)	0.99	−0.10 (0.05)	0.91	−0.08 (0.05)	0.93
Mental health diagnosis			−0.85 (0.08)***	0.43	−0.88 (0.08)***	0.41
Substance use			−0.36 (0.07) ***	0.70	−0.33 (0.07)***	0.72
Cumulative ACEs score			0.20 (0.02)***	1.23	0.17 (0.02)***	1.19
Age			0.08 (0.02)***	1.08	0.11 (0.02)***	1.12
Incarcerated at follow-up 1					0.93 (0.06)***	2.52
Days incarcerated since baseline					−0.01 (0.00)*	0.99
Constant	1.67 (0.03)***	5.32	0.76 (0.34)*	2.15	0.13 (0.33)	1.14
Observations (*N* for each model)	550		550		550	
R^2	0.000		0.043		0.067	

***$p < .001$, **$p < .01$, *$p < .05$

being older ($\beta = .11$, $p < .001$), increased the likelihood of being re-arrested by 19% and 12%, respectively.

Discussion

This study examined the longitudinal racialized gender differences present in predicting recidivism for African American youth with a history of juvenile justice involvement. Our results support previous studies that the prevalence of trauma and mental health disorders among justice-involved youth is exceptionally high and shows substantial differences by gender when examining African American youth (McCoy et al., 2016; Teplin et al., 2013). This study is strengthened by examining the racialized gender differences on outcomes for this justice-involved population.

We find that African American girls in the juvenile justice system have significantly higher rates of ACEs exposure and mental health diagnoses at baseline and higher mental health service rates over time, compared to African American boys. African American boys have higher levels of substance use diagnoses at baseline compared to girls, but that difference was not significant. We found that receipt of mental health services was significantly correlated with an increased risk of re-arrest for girls. In contrast, mental health service use was not significantly related to re-arrest for boys. Though contrary to our hypothesis, there is support in the literature for these findings.

Sue et al. (1991) found in the general population that even when engaged in mental health service use, African Americans experienced less positive outcomes compared to other groups.

Davis et al. (2009) found girls who received mental health services in community mental health settings were more likely to be arrested at younger ages and more frequently than girls not receiving mental health treatment. Our findings also support those of Espinosa et al. (2020) who found that boys were institutionalized for a longer period compared to girls due to factors more closely associated with criminal history such as offense severity and number of prior offenses. Further, in a study of 34,000 youth in three urban counties in Texas, Espinosa et al. (2013) found that girls with trauma experiences in the juvenile justice system were more likely to be funneled into the juvenile justice system compared to boys and those without a mental health need.

This study suggests that justice-involved girls who receive mental health services experience higher rates of distress than justice-involved boys, as girls had significantly higher levels of ACEs and mental health diagnoses at baseline compared to boys. Additionally, justice-involved girls may be more likely to be referred to mental health services due to the belief that criminality among girls is cause by underlying mental health problems or gender nonconforming behavior that is often misinterpreted as having an attitude, being disruptive, or being threatening (Morris, 2016). On the other hand, boys' mental health behaviors may often be attributed to perceived inherent criminality or a higher perceived rating of criminogenic risks (Eno Louden et al., 2018; Pottick et al., 2007).

These findings may be more extreme when race is taken into account. Accordingly, justice-involved African American girls may be more likely to be referred for mental health services, especially in school settings where they often show resistance to oppressive practices (i.e., zero tolerance policies), that may result in their suspension, expulsion, or arrest (Kalu et al., 2020; Morris, 2016). African American girls are six times more likely to be suspended and four times more likely to be arrested than their white counterparts for the same offenses (U.S. Department of Education, 2018). Consequently, in the school setting, African American girls who may actually be trying to protect themselves from oppressive practices are viewed as threatening, defiant, and non-compliant (Conrad et al., 2014). In actuality, they are more than likely using survival coping mechanisms, which help them avoid danger in situations of immediate threat and harm (Ford et al., 2007; Kerig, 2018; Morris, 2016; Quinn et al., 2020). Justice-involved African American boys were more likely to be punished through harsher sanctions, such as being re-arrested at higher rates at Follow-Up 1 and having longer days of incarceration after being re-arrested. Thus, racialized gender differences appear to have more detrimental outcomes for justice-involved African American boys than justice-involved African American girls.

It is essential to note the systematic oppression that African American boys, in particular, have experienced regarding the criminal justice system (Alexander, 2010; Sidanius et al., 2020). Perhaps addressing the larger systemic issues within the justice system for African American youth is a more effective manner to address this oppression than individual mental health service use. However, it is important for those currently involved within the system to address the higher rates of trauma and mental health diagnoses already present. Given that we found significant differences by gender regarding ACEs and mental health diagnoses, our second hypothesis was supported. Further, we argue that gender-responsive and culturally responsive programming regarding mental health service use are likely beneficial for African American justice-involved youth.

Need for Gender-Responsive and Culturally-Responsive Programing

Gender-responsive programming begins from a place that acknowledges that both girls' and boys' experiences, needs, and strengths should be considered in the design and development of interventions, because girls and boys respond

differently to interventions (Covington & Bloom, 2006). Though similar risk factors may appear to promote delinquency among female and male youth, the level, rate of exposure, and sensitivity to certain risk factors differ across the genders (Zahn et al., 2010). From a gender-responsive perspective, it is vital to understand factors that may be common at the prevalence level for both girls and boys but may be distinct regarding the mechanisms of how they operate for the different genders (Welch-Brewer et al., 2011).

Gaarder et al. (2004) found that the lack of available programs, as well as a lack of knowledge and understanding of gender- and culturally-responsive treatments, resulted in the perception among probation officers that girls are hard to work with. In this study, probation officers generally perceived girls as emotionally unstable and dishonest. Additionally, the lack of responsivity to the specific criminogenic needs of justice-involved girls goes against the principles of the Risk-Needs-Responsivity framework and could be viewed as an error of the juvenile justice system (Bonta & Andrews, 2007; Gaarder et al., 2004). Additionally, an Afrocentric approach that follows ethical guidelines can bolster existing mental health services to achieve better outcomes for African American justice-involved youth (Turner, 2019). In addition to being holistic and relational in regard to its continuity of care, African American girls, in particular, could benefit from a culturally responsive and trauma-informed approach that recognizes and responds to the unique needs of individual African American girls and resists caricatures and stereotyping (Walker et al., 2015).

Mental health providers' lack of cultural awareness regarding the differing presentation of mental health symptoms among African American youth compared to other youth can often lead to underdiagnoses, misdiagnoses, and the increased use of physical restraints among justice-involved African American youth compared to other groups (Corbit, 2005; Hicks, 2011). For example, Lu et al. (2017) found that depression presents differently among black adolescents compared to other groups, and it is important for clinicians to be aware of the possible gender differences when working with black boys particularly. Depression often masks as anger, aggression, and irritability among black boys compared to other groups (Choi, 2002; Choi & Park, 2006).

To address the issue of mental health treatment within the juvenile justice system for African American youth, Keys (2009) recommends encouraging more African Americans to enter the mental health field and create more race-conscious mental health services within the juvenile justice system to address the unique cultural needs of African American youth. We recommend taking an intersectional approach to include both race- and gender-conscious mental health treatment and programming to address African American justice-involved youth's unique needs. These findings suggest that the mental health treatment received was not beneficial in predicting these youth's positive developmental outcomes. If simultaneous race-conscious and gender-conscious systematic mental health programming for justice-involved youth does not exist, it must be created as the mental health services received in this study appear to have harmful recidivism consequences for African American youth with a history of juvenile justice involvement.

Multisystem Involvement of Youth in the Juvenile Justice System

Finally, given the high levels of trauma, ACES, mental health issues, and behavioral issues, it is important to note that involvement with multiple service systems is the rule rather than the exception for youth in the juvenile justice system (Ryan et al., 2011; Zajac et al., 2015). Involvement in child welfare, mental health, and special educational systems are common among justice-involved youth (McCoy et al., 2016). Interacting with multiple providers can be overwhelming to youth, mainly due to the lack of seamless interplay between systems (Davis et al., 2009). We recommend the development of an integrated delivery system between justice agencies and other social service providers that would specifically focus on behavioral health, prison correctional agents, parole case management, and treatment providers (Hamilton & Belenko, 2016).

Evidence-based interventions such as Multisystemic Therapy (MST) and Multidimensional Treatment Foster Care are home-based family treatment models provided as an alternative to group homes and residential settings. Both are examples of evidence-based interventions that address the multiple systems and environments that youth are a part of as well as reducing delinquency (Henggeler & Sheidow, 2012). MST is a well-established treatment for African American youth in the general population (Pina et al., 2019). However, more studies are necessary to test the effectiveness of these programs to ensure that they are both culturally responsive and gender-responsive for youth in the juvenile justice system.

Limitations

Strengths of the study (longitudinal design, large sample of both justice-involved girls and boys) are tempered by several limitations. First, our findings may not be generalizable to all justice-involved African American youth in the United States. Our results may not be generalizable to individuals who have not been arrested, exposed to violence, have not been system-involved (i.e., juvenile justice, special education, or child welfare), or those who were born outside of the United States.

Second, as this is secondary survey data, we were unable to get the specificity we would have preferred if the study used primary data collection. As a result, we could not differentiate between the specific mental health interventions that youth participated in throughout the study. For example, it would have been beneficial to know the specific type of mental health service model used in treatment (e.g., Multisystemic Therapy, Cognitive Behavioral Therapy, or Emotion Focused Therapy). Having a more precise measure of mental health service use, including time points for when youth engaged in services, would have been beneficial. Further, the timing of mental health service use and re-arrests is unknown. Mental health service use could have taken place either before or after re-arrest. Additionally, the data from the study is self-report, including arrests since the last interview. However, prior research has shown that approximately 80% of study participants accurately report their arrest history, indicating that self-reported arrest data has adequate validity (Daylor et al., 2019).

Also, it is worth noting that the R^2 was low for many of the models, which suggests poor predictive power. Consequently, other multivariate analyses, such as structural equation modeling, should also be conducted to establish a greater understanding of the associations with variables and recidivism. Qualitative findings may also provide some context for quantitative findings. This would enhance targeted and effective interventions, taking racialized gender differences into account.

While gender is included as a binary category in this study, other identities, including a broader gender spectrum, are not considered. Gender identity plays a substantial role in mental health treatment and potential re-arrest due to the intersection of multiple identities such as race, gender, and sexuality. The binary use of gender is a limitation in this study.

Lastly, the data was collected from youth while they were detained from 1995 to 2001. The authors recognize that this may be viewed as a limitation in our study. Since the data have been collected, there have been some advancements in juvenile justice reform, including efforts to reduce disproportionate minority contact and the implementation of several diversion programs focused on mental health and substance abuse. However, taking an intersectional approach to justice-involved youth is a question that is understudied within the literature. Our findings demonstrate the necessity of taking into account multiple identities to examine the relationship between justice involvement, mental health service use, and recidivism. Despite the age of the data, there are clear clinical implications. Further, Jacobs and Gottlieb (2020) suggest that future research focused on reducing recidivism incorporates ecological factors, improves measurement, and expands upon self-report measures by including administrative record reviews for offense types. Linking administrative reports of the youth's arrest record would also benefit future directions.

Conclusion

In general, African Americans, and specifically African American girls, are overrepresented within the juvenile justice system regarding mental health disorders and higher rates of trauma (Chesney-Lind et al., 2008; Hicks, 2011). However, few previous studies have sought to identify promotive factors for these identities and address the outcomes of African American youth and African American girls in particular. While it was hypothesized that mental health service use would be promotive in predicting positive child development outcomes, we found that was not the case. Mental health service use was more likely to predict increased recidivism among justice-involved African American girls. It was not significant for justice-involved African American boys.

Our findings show that instead of promoting positive developmental outcomes for justice-involved African American youth, such as reducing recidivism, the mental health services used in this study may at worst be detrimental (for girls), and at best be ineffective (for boys). These results show it is necessary to identify potential racialized and gendered differences among justice-involved youth, particularly those that may be more salient for African American girls (Morris, 2016; Morris & Perry, 2017). This study found mental health services were more detrimental for African American girls than boys when it came to recidivism. While it is crucial to note gender differences regarding mental health service use, it is important to also note the substantial oppression of African American boys regarding the increased likelihood of being incarcerated, longer average days of incarceration, and higher rates of re-arrest compared to African American girls.

Backgrounds of trauma, ACES, incarceration, and the inclusion of promotive or protective factors carry information that may inform prevention and intervention efforts that target appropriate intervention strategies. Specifically, implementing such efforts should promote mental health, well-being, and decrease future juvenile justice involvement. Utilizing an innovative intersectional healing approach needs to be implemented across numerous social work and juvenile justice settings in recognizing that although trauma contributes to many health and social problems, youth can heal (Bowen & Murshid, 2016; Ginwright, 2015, 2018). While the investigation of mental health service use is vital in identifying unique individual-level mechanisms to reduce recidivism over time, ultimately identifying more extensive systematic interventions at the macro and policy levels may

be more effective in producing positive developmental outcomes for justice-involved African American youth.

Appendix 1

Items comprised within mental health service use variable

Mental health service use
Emotional/behavioral help thru mental health services
Individual counseling
Group counseling
Family counseling
Emotional/behavioral help thru mental health services since the last interview
Inpatient service thru residential treatment center since the last interview
Inpatient service thru group home since the last interview
Inpatient service thru therapeutic foster home since the last interview
Inpatient service thru emergency shelter for emotional/behavioral problem since
Outpatient service thru community mental health center/outpatient mental health

Appendix 2

Items comprised within mental health diagnosis variable

Mental health diagnosis
Attention deficit hyperactivity disorder
Major depression
Overanxious disorder
Obsessive or compulsive disorder
Generalized anxiety disorder
Mania—algorithm #1 or #2
Hypomania—algorithm #1 or #2
Panic disorder
Psychosis screen—adjusted following clinical review
Separation anxiety disorder
Dysthymia

Appendix 3

Items comprised within substance use variable

Substance use
Alcohol dependence
Alcohol abuse
Marijuana dependence
Marijuana abuse
Other substance abuse
Any drug class used three times in the past year and one time in the past 6 months
Other substance dependence

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