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The association between criminal legal attitudes and healthcare utilization among adolescents: differences by gender and race

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System avoidance is a concept that individual contact with the criminal legal system causes avoidance of other social institutions. Negative attitudes about the criminal legal system and subsequent mistrust in healthcare systems or providers have only been studied in adults. Therefore, the aim of this study is to explore the association between healthcare utilization and youth-reported negative criminal legal attitudes stratified by gender and race in adolescents. Adolescents from the Future of Families and Child Wellbeing Study self-reported attitudes involving legal cynicism, police legitimacy, and healthcare utilization. Logistic regressions were estimated to examine the associations between youth-reported criminal legal attitudes involving legal cynicism and police legitimacy, healthcare utilization, and sociodemographics. Only among non-white girls were negative criminal legal attitudes significantly associated with reduced likelihood of healthcare utilization during the previous 12 months (aOR = 0.55, $p \leq 0.01$). Negative criminal legal attitudes in non-white girls reduced the odds of healthcare utilization, which supports the concept of system avoidance of institutions. This has implications for policymakers as they enact laws on crime and surveillance, especially in minority communities, as views on the criminal legal institution can impact other facets of life. More research is needed to directly explore this relationship beyond cross-sectional studies.

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Introduction

Many adolescents interact with police (Hofer et al., 2020) which affects future law-related beliefs and behaviors in a developmental process known as legal socialization (Geller and Fagan, 2019). If adolescents observe injustice with legal actors, they may question the procedures of legal processes, the morality of authority figures, and the fairness of the law, resulting in legal cynicism and mistrust of other social institutions where authority can exert control (Geller and Fagan, 2019; Sampson and Bartusch, 1998). The concept of system avoidance has emerged due to an increase in police surveillance during the last 30 years, especially in racialized neighborhoods. This concept postulates that contact with the criminal legal system causes individuals to avoid other surveilling institutions that keep formal records, like medical, educational, and financial institutions (Brayne, 2014).

Healthcare is a core social institution; a structure of power, shaping societal norms and values around personal health (Freedman, 2005). There is emerging evidence that criminal legal contact may impact healthcare utilization. So far, studies with adults have shown that contact with police increases the chance a person will not obtain medical care when needed (Brayne, 2014), avoid formal healthcare settings (Carbonaro, 2022), and that harassment from police increases distrust of healthcare providers (Feelemyer et al., 2023). The present study examines the link between youth-reported attitudes involving legal cynicism, police legitimacy, and their subsequent healthcare utilization in a sample of adolescents from the Future of Families and Child Wellbeing Study (FFCWS). We hypothesize adolescents who have greater negative criminal legal (CL) attitudes will also be skeptical of healthcare as an institution, thereby reducing their likelihood of utilizing health services.

Materials and methods

Data. The FFCWS comprises a cohort of approximately 4,700 families and is representative of a nationally-based sample of non-marital births in large U.S. cities (Reichman et al., 2001). Six waves of data have been collected to date, beginning in 1998-2000, approximately 48 h after birth. Additional waves of data were collected at age one (1999–2001), three (2001–2003), five (2003–2006), nine (2007–2010) and fifteen (2014–2017). The de-identified data from the FFCWS are publicly available and were approved by the University of Alabama at Birmingham IRB for secondary analyses. The analytic sample for the current study includes adolescents who completed the Wave 6 survey at age fifteen (Bendheim-Thoman Center for Research on Child Well-being, C. P. R. C, 2021) ($N = 3444$ of 4663 eligible) with complete data on study variables.

Measures

Healthcare utilization. Primary caregivers reported on their teen's previous year's healthcare utilization with the item, "In the last 12 months, has [youth] been seen by a doctor, nurse, or other healthcare professional for a regular check-up or well visit? (i.e., a visit to the doctor when he/she is not sick, but to get checked out or to get vaccinations)" (1 = *yes*, 0 = *no*).

Criminal legal (CL) attitudes. Adolescents reported on their legal cynicism and negative attitudes toward the police with six questions adapted from prior research (Sampson and Bartusch, 1998). Items included: "I have a great deal of respect for the police" (reverse coded), "It's okay to do anything you want", "There are no right or wrong ways to make money", "Laws are made to be broken", "If I fight with someone, it's nobody else's business", and "the police create more problems than they solve." Items were rated on a 4-point scale (3 = *Strongly agree*, 0 = *Strongly disagree*) and averaged into a mean score, where higher scores reflect greater negative CJ attitudes ($\alpha = 0.67$, score range = 0–3).

Health insurance status. Primary caregivers reported whether their teen was currently covered by: "Medicaid or by another public, federal, or state program that pays for medical care, or do you belong to a Medicaid HMO?" and/or "A private health insurance plan?" If the primary caregiver reported "yes" to either question, the teen was categorized by having current health insurance (1 = *yes*, 0 = *no*).

Delinquency. Adolescents self-reported their involvement in delinquent acts during the past twelve months with thirteen items adopted from the National Longitudinal Study of Adolescent Health (ADD Health) (Harris, 2013). A variety score was created given the low prevalence of delinquency items. Such an approach has been recommended to reduce bias and increase the validity of estimates with skewed delinquency measures (Sweeten, 2012). Each item was recoded as 1 (*engaged in the delinquent act in the past year*) or 0 (*did not engage in the act during the past year*), before summing the items to create a delinquency score. Higher scores correspond to participation in a greater number of delinquent activities (score range for the analytic sample = 0–12).

Sociodemographics. Analyses were stratified by gender (1 = *male*, 0 = *female*) and race/ethnicity (1 = *non-white*, 0 = *non-Hispanic white*). Covariates include age (range = 14–19), primary caregiver-reported annual household income (0 = *under $5000* to 8 = *greater than $60,000*), primary caregivers' highest level of education (0 = *less than high school* to 3 = *college or graduate*), and primary caregivers' current marital status (0 = *not married*, 1 = *married*). Teen depression was self-reported with five items from the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) and was averaged to create a score for teen depression ($\alpha = 0.76$). Adolescents' anxiety was self-reported with six items from a modified version of the Brief Symptom Inventory 18 (BSI 18) (Derogatis and Kathryn, 2000) and were averaged to create a score of teen anxiety ($\alpha = 0.76$).

Statistical analyses. Logistic regressions were estimated in Stata 17 to examine the associations between youth-reported criminal legal attitudes involving legal cynicism and police legitimacy, healthcare utilization, and sociodemographics. Each of the logistic regression models is reported separately by gender and race.

Results

Descriptive statistics for the study measures report that approximately 89% of youth utilized healthcare in the last 12 months [88.66%] and approximately 96% of youth currently had health insurance [96.22%]. The mean (M) and standard deviation (SD) for each study scale include criminal legal attitudes ($M = 0.76$, SD = 0.57) and delinquency ($M = 1.09$, SD = 1.66). Moreover, the analytic sample was approximately 48% female [47.80%] and 82% non-white [81.93%], with a mean age of approximately 15 ($M_{age} = 15.60$).

The association between healthcare utilization and criminal legal attitudes by gender and race is presented in Table 1. Only among non-white girls were negative criminal legal attitudes associated with a reduced likelihood of seeing a doctor for a regular check-up during the previous 12 months (aOR = 0.55, CI = 0.35, 0.85). For non-white girls, delinquency was associated with an increased likelihood of seeing a doctor for a regular check-up (aOR = 1.28, CI = 1.06, 1.55). Having health insurance

Table 1 Association between healthcare utilization and criminal legal (CL) attitudes by race and gender.

	Non-white boys aOR (95% CI)	Non-white girls aOR (95% CI)	White boys aOR (95% CI)	White girls aOR (95% CI)
CL attitudes	0.81 (0.57, 1.16)	**0.55**** (0.35, 0.85)	1.14 (0.47, 2.76)	0.96 (0.35, 2.60)
Health insured	**3.33**** (1.60, 6.93)	**3.91**** (1.77, 8.62)	1.36 (0.26, 7.07)	**5.46*** (1.13, 26.31)
Depression	0.98 (0.65, 1.48)	1.40 (0.89, 2.22)	0.73 (0.32, 1.67)	1.07 (0.41, 2.78)
Anxiety	1.01 (0.69, 1.47)	0.76 (0.51, 1.14)	0.73 (0.35, 1.51)	1.31 (0.58, 2.97)
Delinquency	1.01 (0.93, 1.17)	**1.28**** (1.06, 1.55)	1.18 (0.89, 1.55)	1.18 (0.76, 1.85)
Age	0.98 (0.77, 1.25)	0.92 (0.70, 1.21)	0.92 (0.55, 1.54)	0.93 (0.55, 1.55)
Parent education	1.18 (0.97, 1.44)	1.21 (0.97, 1.51)	1.41 (0.92, 2.16)	0.97 (0.61, 1.56)
Income	**1.10*** (1.02, 1.19)	1.07 (0.98, 1.17)	0.96 (0.76, 1.22)	1.06 (0.84, 1.33)
Parent married	0.82 (0.54, 1.23)	0.90 (0.56, 1.45)	1.13 (0.47, 2.70)	1.50 (0.61, 3.69)
	$n = 1222$	$n = 1025$	$n = 258$	$n = 248$

aOR adjusted odds ratio.
$^{**}p \leq 0.01$; $^{*}p \leq 0$ .05, Significant findings are presented in bold.

was significantly associated with an increased likelihood of seeing a doctor for regular check-ups among non-white boys, non-white girls, and white girls respectively (aOR = 3.33, CI = 1.60, 6.93; aOR = 3.91, CI = 1.77, 8.62; aOR = 5.46, CI = 1.13, 26.31). Household income increased the likelihood of healthcare utilization in non-white boys (aOR = 1.10, CI = 1.02, 1.19).

Discussion

The present study evaluated whether negative CL attitudes translate to reduced healthcare utilization in adolescents. Non-white girls had a unique association between negative CL attitudes and not seeking preventive healthcare. This is consistent with the sociological concept of system avoidance, such that negative attitudes/experiences with legal authority could be contributing to non-white girls' withdrawal from other institutions such as healthcare (Brayne, 2014; Carbonaro, 2022; Feelemyer et al., 2023). Racially minoritized girls, who already experience neglect, abuse, and exclusion from health systems may be particularly susceptible to healthcare system avoidance perpetuated by these negative CL attitudes.

Surprisingly, delinquency among non-white girls was associated with a greater likelihood of healthcare utilization. Higher levels of delinquency are thought to propagate legal cynicism (Hofer et al., 2020), and therefore system avoidance. However, delinquent behavior has the potential for adverse health outcomes (e.g., injury, drug use, unintended pregnancy) (Braverman and Morris, 2011), which creates the need for both emergent and routine healthcare regardless of mistrust in the institution. Based on this study's findings, we suggest an opportunity for future research to explore how and when non-white girls with delinquency are using healthcare services.

These findings should be considered in light of several limitations. First, the data are cross-sectional and should not be considered causal. Healthcare utilization was a crude measure of having seen a healthcare provider for a check-up in the past year. Also, healthcare utilization was only assessed based on preventative visits, whereas emergency department, urgent care, and specialty visits were not assessed. Finally, increased police contact is attributed to legal cynicism (Geller and Fagan, 2019), but this relationship was not directly explored in the current study. Nonetheless, sensitivity analyses controlled for whether youth reported having ever been stopped by the police (i.e., "Have you ever been stopped by the police while on the street, at school, in a car, or some other place?"). The significant findings remained unchanged, albeit delinquency became marginally significant with an increased likelihood of seeing a doctor for a regular check-up among non-white girls (aOR = 1.20, CI = 0.99, 1.47). Moreover, ever being stopped by the police was not significantly associated with the reduced likelihood of seeing a doctor for a regular check-up among *any* of the gender/racial groups, although a former police stop was marginally associated with an increased likelihood of utilizing healthcare among non-white girls (aOR = 2.08, CI = 1.00, 4.34), thus, mirroring the findings of delinquency and healthcare utilization for non-white girls.

Implications

Negative criminal legal attitudes may harm trust and generalize to other social institutions, including healthcare. Adolescent's attitudes about the criminal legal system may affect their future health. Therefore, policymakers should view criminal surveillance and police presence in communities, especially minority communities, as having a developmental impact on legal attitudes that could have downstream effects of system avoidance which impacts the use of institutions of society. Furthermore, the concept of system avoidance and its connection to healthcare is understudied. We suggest that future research on criminal legal attitudes pointedly examines if individual mistrust in the criminal legal institution creates feelings of mistrust in the healthcare institution. Future work in this area could also explore potential mechanisms that could impact this relationship to healthcare utilization long term.

Data availability

Data are publicly available and can be downloaded through the Office of Population Research data archive. To access the data, users must complete two steps: (1) register as a user of Princeton University's Office of Population Research data archive, and (2) sign up for access to the FFCWS within the data archive.

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Author contributions

CRM: helped conceptualize the manuscript and wrote the manuscript. KBC: provided feedback and helped write/edit the manuscript. KLC: helped conceptualize the manuscript and provided feedback/edits. JMG: conducted the analyses and helped write/edit the manuscript.

Competing interests

The authors declare no competing interests.

Ethics approval

The IRB at the University of Alabama at Birmingham granted permission for secondary analyses for the current study (IRB-300011562).

Informed consent

Informed consent was gathered for the study by the Future of Families and Child Wellbeing Study.

Additional information

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