Criminal and Civil Summons Court Appearance: Predictors of Timely Response to Summonses for Lower-Level Offenses in New York City

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ABSTRACT AND ARTICLE INFORMATION

The present study examines court appearance data for written appearance tickets ("summonses") before and after the implementation of the Criminal Justice Reform Act (CJRA) in New York City. The CJRA moved the adjudication of some summonses from the criminal to civil courts and provides a unique opportunity to examine court appearance for the same set of offenses in two separate contexts. This research examines the role of demographics, offense type, and neighborhood factors on court appearance. We find that males and adults 35-65 years old were less likely to respond to their summons compared to adolescents (16-17 years old) and females, and that those who were issued summonses for littering and public consumption of alcohol were less likely to appear than those with summonses for public urination, noise, and parks offenses. The analyses also reveal that living in a neighborhood with high levels of concentrated disadvantage reduces the odds of court appearance and that neighborhood level residential stability is associated with greater likelihood of court appearance. About half of summonses were responded to by the hearing date in both criminal and civil court, which is notable given that warrants are not issued for nonappearance in civil court. This suggests that issuance of bench warrants may not strongly influence court appearance for these offenses in criminal courts or suggest that various options available in civil court may enhance the ease of responding to a civil summons. Analysis of a matched sample suggests that individual and neighborhood characteristics are stronger predictors of the likelihood of court appearance compared to the type of court (criminal or civil court). The paper concludes with a call for more nuanced examination of nonappearance for lower-level offenses as distinct from absconding and other pretrial risks associated with more serious offenses.

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In most jurisdictions, the volume of enforcement actions for lower-level offenses (e.g., misdemeanor arrests, tickets, and citations) outnumber felony arrests (Chauhan & Travis, 2018). In light of the negative consequences associated with custodial arrests (including time, financial costs, social stigma, and negative implications on employment and community ties), a growing number of jurisdictions have adopted reforms allowing for citations in lieu of arrests for some lower level offense types (National Conference of State Legislatures [NCSL], 2019). These citations allow a law enforcement officer to issue a written order mandating an appearance in court at a later date as an alternative to conducting a custodial arrest and detaining the individual until they can appear in court (International Association of Chiefs of Police [IACP], 2016). While these forms of non-custodial arrests prevent many unintended consequences, they also increase the likelihood of missing future court appearances (IACP, 2016). In many jurisdictions, failure to appear in court, including for non-custodial arrests, can result in the issuance of a bench warrant and additional prosecution (Bornstein, Tomkins, Neeley, Herian, & Hamm, 2012).

In addition to increased use of citations in lieu of arrests, there have been growing efforts to "decriminalize" minor offenses by redefining or reclassifying them as civil infractions (Brown, 2016; Natapoff 2015; NCSL, 2018). These reforms are intended to address the negative consequences associated with the criminal prosecution of minor offenses, including bench warrants and the impact of conviction on employment, education, and community ties. The Criminal Justice Reform Act (CJRA) of New York City is an innovative example of reform for lower-level enforcement. The CJRA is a city level legislative and policy change that moved the adjudication of summonses for a set of behaviors (i.e., public consumption of alcohol, public urination, littering, noise violations, and park violations) frequently characterized as "quality of life" offenses from the criminal to civil courts. This reform was intended to enhance the proportionality of response, address collateral consequences of criminal convictions (e.g., on employment, housing, and immigration), and to eliminate the possibility of a bench warrant resulting from a failure to appear for these minor offenses.

The CJRA provides a unique opportunity to examine whether court appearance rates and predictors systematically differ for the same set of offenses when they are moved from criminal courts (where warrants are issued for nonappearance) to a civil court where there are additional methods (phone and online) and flexibility for responding to the summons and warrants are not issued for non-

appearance. In addition to contributing to the small body of research on individual and incident-level predictors of court appearance across both criminal and civil court sites, this study extends the existing scholarship by identifying neighborhood-level factors that impact the likelihood of court appearance.

Literature Review

Citations and Court Appearance

The practice of issuing written citations in lieu of making an arrest has a relatively long history in the United States, starting with issuing citations in light of the growing prevalence of traffic violations in the early 1900s and extending to other offenses in subsequent decades (Feeney, 1972). The issuance of criminal summonses in lieu of custodial arrests for some misdemeanors in New York City was introduced in the 1960s under the Manhattan Summons Project, an early initiative of the Vera Foundation and the New York Police Department (Samuels, 1964). This Project was motivated by an interest in reducing the time, social stigma, and employment loss associated with custodial arrest and detention.

In more recent decades, New York City has adopted two distinct citation (or "appearance ticket") procedures: 1) the criminal summons and 2) the desk appearance ticket (DAT). Criminal summonses are issued for a number of lower-level offenses that do not require fingerprinting and arrest (largely violations of local ordinances and administrative code, as well as some penal law code misdemeanors and violations). Summonses serve as the charging instrument and initiate prosecution in local Criminal Court (New York County Lawyers Association [NYCLA], 2011, p. 96). A DAT is issued for a specific set of eligible misdemeanors (and occasionally for a class E felony), and serve as a form of station house release. Recipients of DATs are arrested and fingerprinted and then issued a ticket indicating the date and location for their future arraignment in court (NYCLA, 2011, p. 10). The present study focuses on summonses rather than DATs.

Other jurisdictions, including in California and Nevada, also started adopting mechanisms for non-custodial arrests in the late 1960s and early 1970s (Feeney, 1972; Horney, 1980). Over time, citation issuance has expanded to most jurisdictions and a larger number of offenses for cases in which the likelihood of an individual fleeing the jurisdiction was presumed to be low and there was a presumption of low risk or no indicated reason for the individual to be detained. By 2017, all states allowed for citations in lieu of arrests (National Conference of State Legislators [NCSL], 2018), and more than half the states have legislated a presumption of citation rather

than arrest for specific citations or circumstances (NCSL, 2019). These alternative enforcement methods demand less time of the arresting officer and community member being arrested (IACP, 2016) and reduce reliance on jail, which, in turn, reduces both monetary and societal costs, including lost wages, social stigma, and removal from the community (Feeney, 1972; Bernal, 2017).

The consequences of failing to appear in criminal court are significant, as nonappearance is a crime in nearly all 50 states (Corey & Lo, 2019). The treatment of nonappearance varies by state, with penalties as high as 10 years in prison for failing to appear in court for felony offenses in Rhode Island (State of Rhode Island General Assembly, 2012). While penalties for nonappearance for citations and other misdemeanors are less severe, they can result in the issuance of a bench warrant and can also affect an individual's likelihood of obtaining bail in the future (Bornstein et al., 2012).

In addition to citations for misdemeanors and other lower-level offenses, some jurisdictions have also adopted civil citation procedures. Civil citation generally involves legislative reclassification of some criminal offenses to allow civil adjudication in municipal or administrative courts (Natapoff, 2015). Early civil citations procedures were adopted as alternatives to criminal prosecution for some traffic offenses (Hoemann, 1982). More recently, decriminalization and civil citation has been enacted by some jurisdictions for a range of historically criminal offenses, including driving with a suspended license, marijuana possession, and disturbing the peace (Natapoff, 2015). While there has been debate about the financial consequences and net-widening effects of decriminalization through civil adjudication, these reforms have been motivated by an interest in reducing the caseloads in criminal courts and preventing the collateral consequences that result from criminal conviction (Brown, 2016; Natapoff, 2015).

Research on Court Appearance

While there are robust national policy conversations on the appropriate use of bail and pretrial detention as well as their association to failure to appear in court, and a growing body of research on pretrial risk assessment (Bechtel, Holsinger, & Lowenkamp, 2017; Koepke & Robinson, 2018), there has been less focus on predictors of court appearance for citations. Further, baseline nonappearance rates can vary significantly by jurisdiction and offense types (Bornstein et al., 2012). For instance, in Jefferson County, Colorado, there is an over 20% nonappearance rate for misdemeanors and traffic offenses (Schnacke, Jones, & Wilderman, 2012), while in Lafayette Parish, New Orleans, there is a nonappearance rate of 52% among traffic, misdemeanor, and felony hearings (Howat, Forsyth, Biggar, & Howat, 2016). Research has also found that court appearance rates are lower for less serious offenses (i.e., misdemeanor and traffic) relative to felonies (Howat et al., 2016). Research in this area is further complicated by inconsistencies in measurement, including some studies measuring nonappearance at the case-level and others examining each court appearance (Bernal, 2017; Clark & Henry, 2003). Empirical research on court appearance for citations can help illuminate the factors that make court appearance more or less likely and can also add nuance to the literature to better distinguish nonappearances due to failing to respond to a citation relative to more serious charges such as felony cases (Gouldin, 2018).

There is some consensus on factors that impact likelihood of court appearance, as multiple studies have found that a longer case processing time and indicators of more extensive criminal history (e.g., prior arrests, prior jail admissions, open cases) increase the likelihood of failure to appear (Siddiqi, 2009; Zettler & Morris, 2015). With regards to demographics, the literature is mixed. A study by Siddiqi (2009) in New York City found that the odds of pretrial misconduct (which included failure to appear along with rearrest for a violent offense) were lower for individuals who were older or White, while Black, Hispanic, and younger individuals had a higher likelihood of pretrial misconduct. Similar findings were obtained in a study on court appearance in Multnomah County, Oregon, where nonappearance rates were higher for non-White individuals in comparison to White individuals (O'Keefe, 2007). Additionally, Zettler and Morris (2015) found that males had a higher likelihood of failure to appear. However, a study by Bornstein and colleagues (2012) found that the effect of both race and sex were not significant predictors of failure to appear once geographic location, offense type, and number of charges were included in the model. Geographically, failure to appear has been shown to be more likely in urban counties than rural counties (Bornstein et al., 2012). An analysis specific to New York City found variation across counties, including lower rates of pretrial misconduct for those arrested in Queens and higher rates for those arrested in Staten Island, in comparison to those arrested in the Bronx (Siddiqi, 2009).

There is also research on social factors that may impact court appearance. Some research has found that community ties serve as a protective factor against failure to appear, as measures of living in the city where arrested, having a telephone, and being employed or being enrolled in school or a training

program were all related to a lower likelihood of pretrial misconduct (Siddiqi, 2009), while other research on pretrial risk assessment tools found that community ties were not related to likelihood of missed court appearance (Cadigan & Lowenkamp, 2011). Additionally, odds of nonappearance were lower for individuals with more confidence in the justice system and believed in the fairness of the system (Bronstein et al., 2012). While no research to date has examined how the social resources in a community may impact the court engagement of its residents, a significant body of research demonstrates that neighborhood characteristics impact resident behavior and a range of criminal justice outcomes (e.g., Sampson, Raudenbush, & Earls, 1997), including the potential protective effect of residential stability (Boggess & Hipp, 2010) and immigration (Ousey & Kubrin, 2018) on neighborhood-level crime rates.

Research also suggests that time and economic resources impact an individual's ability to appear in court. When asked to evaluate their own reasons for a missed court appearance, individuals were most likely to report nonappearance was due to scheduling conflicts, rather than forgetting about the hearing date or fearing the court outcome (Bronstein et al., 2012). Other researchers have found that individuals who live in neighborhoods with high levels of disadvantage are less likely to successfully graduate from drug court (Howard, 2014) and that individuals who reported being indigent were more likely to miss a court appearance (Zettler & Morris, 2015).

Existing research examining court appearance for lower-level offenses and citations has largely focused on the extent to which court interventions (especially scheduled reminders) can improve court appearance rates (e.g., Howat et al., 2016). Reminders have generally been found to improve appearance rates, including mailed postcard reminders (Bronstein et al., 2013), phone call reminders (Howat et al., 2016; Schnacke et al., 2012), and text message reminders (Cooke et al., 2018). Only one study found that reminders did not improve court appearance rates, which may be attributed to the relatively low failure to appear rate (12%) in the study site (Lowenkamp, Holsinger, & Dierks, 2018).

A number of these studies also found that reminders that indicated the negative outcomes (e.g., warrants) of missing court were most effective in improving court appearance (Bornstein et al., 2012; Tomkins, Bornstein, Herian, Rosenbaum, & Neeley, 2012). An intervention aimed at increasing appearance for summonses was implemented in New York City in 2016, which involved sending a series of three text message reminders to individuals in the week prior to their scheduled court date. Text messages that noted

the consequences of nonappearance and plan-making elements were the most effective and reduced failure to appear by 26% (Cooke et al., 2018).

Both practitioners and scholars have also cited the need for more robust empirical examination of factors that impact court appearance. The IACP's 2016 report on the practice of citations in lieu of arrest called for further examination into how this practice relates to court appearance rates and to identify remedies for addressing the increased risk of nonappearance (and resulting economic and social costs) associated with non-custodial arrests (p.19). Scholars have also noted that the growing attention to pretrial release would benefit from additional empirical research on interventions and conditions of release that best support court appearance (Bechtel et al., 2017; Stevenson & Mayson, 2017). This study seeks to address these calls by identifying individual and neighborhood level factors associated with court appearance for lower-level citations.

Legislative Reform: Moving Summonses from Criminal to Civil Court in New York City

The current study occurs within the context of legislative reform in New York City. The Criminal Justice Reform Act (CJRA) is a set of legislative and policy changes intended to "lighten the touch" of the city's criminal justice system in the enforcement of some lower-level offenses. CJRA created the presumption, absent certain exclusionary factors,[1] that some lower-level offenses would result in a civil rather than a criminal summons. The offenses that became eligible for a civil rather than criminal summonses under CJRA included public consumption of alcohol, public urination, littering, unreasonable noise, and violations of all New York City Parks Rules. These five offenses accounted for over half of all criminal summonses issued in New York City in the year before the legislation went into effect (Mulligan, Fera, Cuevas, Grimsley, & Chauhan, 2018).

The civil summonses designated in the CJRA are returnable to the city's administrative law court, the Office of Administrative Trials and Hearings (OATH), rather than to criminal summons court. Individuals found in violation at OATH do not face criminal conviction and have the opportunity to complete onsite community service in lieu of paying monetary fines. Additionally, while individuals are required to appear in court to respond to most criminal summonses, recipients of civil summonses are able to pay their summons prior to the hearing or to request a remote hearing (e.g., by mail or telephone) rather than appear in person. The CJRA is intended to prevent negative outcomes that individuals may experience as a result of a criminal summons, including potential collateral

consequences for housing, employment, or immigration.

In addition to the different adjudicative processes and additional methods of remote appearance at OATH, the most notable difference in these two summons processes is the outcome of nonappearance. While nonappearance in civil court can result in negative consequences (i.e., additional penalties and collection efforts), there is no criminal outcome associated with this nonappearance. In contrast, failing to appear in court for a criminal summons results in the automatic issuance of a bench warrant.

The CJRA went into effect in New York City on June 13, 2017, and had an immediate impact on the enforcement of these offenses. Nearly 90% of summonses issued for the five impacted offenses were issued as civil rather than criminal summonses in the first six months following implementation (Mulligan, Cuevas, Grimsley, & Chauhan, 2018). There was also a pronounced decline in the total number of summonses issued for the five offenses impacted by CJRA in the year after the legislation went into effect. Specifically, the New York Police Department (NYPD) issued nearly 110,000 criminal summonses for these offenses in 2016, and fewer than 50,000 civil summonses in the year following the implementation of CJRA. While this decline is surprising in light of established research on the risk of net-widening as the result of reforms (Lilley, Stewart, & Tucker-Gail, 2019; Mears et al., 2016), it is in line with an overall decline in the enforcement of lower-level offenses, including a 61% decline in summons enforcement, occurring in New York City during this time period. This context suggests that the decline in the issuance of summonses for CJRA offenses was driven by broader changes in enforcement rather than the result of this specific policy change. Despite this decline, there continued to be a sizeable summons enforcement of these offenses after implementation. This legislative and policy change therefore provides a unique opportunity to examine predictors of court appearance for summonses for the same offense types across criminal and civil court sites.

The Current Study

In the more than half century since the Manhattan Summons Project, researchers and court actors continue to grapple with understanding court appearance, especially appearance rates for lower-level offenses. The present study contributes to this understanding by examining predictors of court appearance for summonses issued in New York City for five lower-level "quality of life" offenses. In addition to individual and incident level predictors, this study also includes neighborhood-level factors that are related to court appearance. This study compares rates and predictors of summons court appearance for the same set of offenses in the civil and criminal courts, an analysis not previously conducted. Beyond a small body of research on debt collection proceedings (Spector, 2011), there has been no empirical research on likelihood of court appearance in the context of civil courts. This is an especially important area of inquiry in the context of growing calls to "decriminalize" some lower-level offenses through a shift to civil enforcement.

Specifically, the current study draws on and extends the existing scholarship by examining four hypotheses on factors that predict court appearance.

Given the importance of reminders about negative consequences of nonappearance in encouraging court appearance (Bornstein et al., 2012; Cooke et al., 2018; Tomkins et al., 2012), we expect that appearance rates will be higher for criminal summonses (which result in a bench warrant for nonappearance) relative to appearance rates for the same offenses in civil court (which do not have warrants for nonappearance).

In line with the majority of prior research on demographics and court appearance, we expect that court appearance rates for summonses will be higher for individuals who are older, female, and White, relative to those who are younger, male, and Black or Hispanic (Siddiqi, 2009; Zettler & Morris, 2015).

Based on prior research, we expect that court appearance rates will vary significantly by offense type (Bornstein et al., 2012; Siddiqi, 2009) and geography of issuance, including higher appearance rates in Queens and lower appearance rates in Staten Island relative to the Bronx (Siddiqi, 2009).

Prior research suggests that the likelihood an individual appears in court is related to their access to social and economic resources (Howard, 2014; Zettler & Morris, 2015). We hypothesize that individuals from neighborhoods with fewer economic and social resources will be less likely to appear in court.

Method

This study examines summonses issued in New York City for the five behaviors (public consumption of alcohol, public urination, littering, unreasonable noise, and violations of all New York City Parks rules) impacted by the CJRA. This analysis includes rates and predictors of court appearance for two time-periods: one year pre- and one year post-CJRA. The pre-CJRA period includes all criminal summonses issued for one of the five behaviors during the one-year period preceding the implementation of CJRA. These criminal summonses were returnable to the criminal summons court and resulted in a bench warrant if the recipient failed to appear. The post-

CJRA period includes all civil summonses issued for these same five behaviors in the one-year period following the implementation of CJRA. The civil summonses were returnable to civil court and did not result in a bench warrant for nonappearance.

Data

The analyses draw on two sources of court data. The first is administrative criminal court records from the New York State Office of Court Administration (OCA). The OCA database consists of incident-level records for all criminal summonses issued in New York City between 2003 and 2017. The sample was restricted to those summonses issued for one of the five CJRA offenses in the calendar year preceding the implementation of CJRA (January 1, 2016-December 31, 2016; N = 109,805). These records report court information, such as a summons number, charge information, warrant status (i.e., warrant opened/closed), final disposition (e.g., dismissed, guilty, etc.), and any associated outcome (e.g., fine amount). The dataset further includes a limited number of demographic characteristics, such as sex, age, and race/ethnicity, as well as the respondent's zip code of residence. Due to high missing rates (over 75%) of data on race in the OCA sample and uncertainty about whether these data were missing at random, race was not included in the analyses of court appearance for criminal summonses.

The second data source includes administrative court records for civil summonses issued for CJRA offenses obtained from the Office of Administrative Trials and Hearings (OATH). The OATH database consists of incident-level records for the five CJRA offenses in New York City starting on June 13, 2017, the date CJRA was implemented. This analysis includes one year of civil summons data, including all CJRA civil summonses issued between June 13, 2017 and June 12, 2018 (N = 60,643). The civil court records included court information, such as a summons number, appearance status, charge information, final disposition, and associated outcome (fine, community service, etc.). It also included a limited number of demographic characteristics, such as sex, age, race/ethnicity, as well as the respondent's zip code of residence.

Finally, Census data from the American Community Survey (2012 to 2016) were used to construct neighborhood characteristics for summons recipients who resided in New York City. There were 317 New York City zip codes of residence reported in the sample, which were aggregated into 214 geo-matched New York City zip code tabulation areas (ZCTAs).[2] Neighborhood measures were then constructed using Census demographic data for the ZCTAs in order to evaluate hypotheses regarding the relationship between characteristics of neighborhoods of residence and likelihood of court appearance.

Exclusion Criteria

A proportion of criminal and civil summonses were excluded from the regression analyses due to missing data. First, the analyses were limited to summonses issued by the NYPD, given that demographic data is not recorded for civil summonses issued by other agencies (e.g., New York City Parks and Recreation and Department of Sanitation).[3] Second, civil cases with a pending or rescheduled hearing were excluded, as these summonses have not yet required a court appearance (less than 4%). Note, all criminal summonses required appearance and either had a final disposition or open warrant. Finally, the analyses were limited to New York City residents and listwise deletion was used to include only cases with data across all variables in the regression samples. In the criminal summons data, four percent of the summonses were missing zip code, nine percent were issued to non-New York City residents, and an additional two percent were missing either sex or age. Therefore, the final regression sample included 83% of all criminal summonses. In the civil summonses data, 35% of the summonses were missing zip code information, and seven percent were non-New York City residents. An additional nine percent were excluded due to other missing information. Therefore, our final regression sample included 51% of all civil summonses.

The high level of missing data for the civil summonses may be for operational reasons, including the adaptation and training required for officers to use the new summons forms as well as changes in the technical and data infrastructure as the legislation was implemented. Because the cause of the missing data is unknown, we are not able to determine the extent to which the information is missing at random. While the proportion of missing data constrains our ability to generalize the findings for the regression analyses of civil summonses, the characteristics of the full and limited regression sample did not suggest any systematic bias.[4]

Court Appearance

The outcome variable ("court appearance") was coded as a binary variable as (0) for a nonappearance (on or before the date indicated on the summons) and (1) for an appearance. The majority of criminal summonses in New York City require an appearance in court (two offenses can be paid by mail). Criminal summonses were coded as having a nonappearance if a warrant was ever issued for that summons (open or vacated). Warrants are automatically issued following a failure to appear on the required appearance date for

criminal summonses (even if the warrant was subsequently vacated), and criminal summons warrants are nearly exclusively issued for nonappearance.[5]

In the civil court, there are a broader range of options for responding to a summons in a timely manner. Civil summonses were coded as having had an appearance if the summons recipient paid their summons before the hearing date or participated in a hearing, either in person or remotely (e.g., telephone, mail, or online). Civil summonses were coded as having a nonappearance if the summons recipient did not pay or appear on or before the hearing date.[6]

It is therefore worth noting that the meaning of "court appearance" differs across these two court sites, especially in light of the various mechanisms the civil court has undertaken to enhance the ease of responding to a summons. We consider these differences in interpreting our findings. We also note that in both court sites, summons recipients are able to resolve a missed appearance by subsequently appearing (criminal court) or paying a fine or requesting a rescheduled hearing (civil court). The measure of appearance used in these analyses is based on the initial required court appearance date and includes a proportion of summonses that were subsequently resolved.

Sample

Demographics and individual characteristics. Tables 1 and 2 present descriptive statistics for the full and limited regression sample of criminal summonses and civil summons, respectively. The **sex** of the summons recipient was dummy coded as male (0; *reference*) or female (1). The variable **age group** was created based on relevant legislative and developmental groupings (including age of criminal responsibility, legal drinking age, and the age-crime curve), and included five age categories: (1) 16-17; (2) 18-20; (3) 21-24; (4) 25-34; and (5) 35 to 65 (*reference*). The New York City **boroughs** were coded as (1) Manhattan (*reference*); (2) Bronx; (3) Brooklyn; (4) Queens; and (5) Staten Island. We accounted for the **offense** type as follows: (1) Public Consumption of Alcohol (*reference*); (2) Unreasonable Noise; (3) Parks Offenses; (4) Littering; (5) Public Urination. A dummy variable was also constructed to indicate whether or not the summons was **issued in the county of residence**. Summonses issued to individuals in the county they live were coded as (0; *reference*), while summonses issued to residents of another New York City county were coded as (1). The race/ethnicity data

reported for civil summonses were coded as 1) White (*reference*); 2) Black; 3) Hispanic White; 4) Hispanic Black; 5) Asian; 6) Alaskan/Native American.

Census demographics. An index of **concentrated disadvantage** was constructed at the ZCTA level based on six Census indicators (2012-2016; Sampson et al., 1997): (1) Percent of individuals below the poverty line; (2) Percent of individuals on public assistance; (3) Percent female-headed households; (4) Percent unemployed; (5) Percent of households with children less than age 18; and (6) Percent of children under the poverty line. The composite score indicated a Cronbach's alpha of 0.89.

The **residential stability** variable was constructed by measuring the proportion of residents in a given neighborhood who had resided in the same household for 7 or more years. Additionally, a measure of **limited English proficiency** reported the proportion of households in which a language other than English was spoken at home and no one 14 and over spoke English only or spoke English very well. Finally, we included a measure **percentage of foreign-born** residents in the ZCTA by using ACS estimates of the total residential population and the number of foreign-born residents.

Analytic Strategy

Logistic regression models were run to obtain estimated odds ratios (ORs) of court appearance to examine the independent relationships between individual, incident, and neighborhood-level variables and appearance rates in the criminal and civil courts. We employed hierarchical regression and added predictor variables to the model consecutively to identify the additive contributions of each set of predictors (individual, incident, and neighborhood) to the model and to examine whether some effects were modified by the addition of covariates. Separate logistic regression models were run for the sample of criminal and civil summonses. Given that race/ethnicity could only be included in the model for the civil summons data, this measure was added as the final step of the hierarchical regression model in order to allow for comparison of the effects of the same set of covariates on court appearance among criminal and civil summonses, as well as to examine the ways in which the inclusion of race/ethnicity in the model moderated the effect of some covariates.

Table 1. Criminal Court Appearance Descriptives, Regression and Full Sample

	Regression Sample						Full Criminal Court Sample	
	Appeared		Failed to Appear					
	N	*%*	*N*	*%*	Total	% Total	Total	% Total
Appearance								
Appearance	52,032	49.72	52,619	50.28	104,651	100.00	125,582	100.00
Sex								
Males	45,922	49.09	47,617	50.91	93,539	89.38	109,518	87.21
Females	6,110	54.99	5,002	45.01	11,112	10.62	13,488	10.74
Missing Sex							2,576	2.05
Age								
16-17 Year Olds	1,493	62.52	895	37.48	2,388	2.28	2,692	2.14
18-20 Year Olds	4,628	58.65	3,263	41.35	7,891	7.54	9,651	7.69
21-24 Year Olds	7,434	51.74	6,935	48.26	14,369	13.73	18,570	14.79
25-34 Year Olds	15,199	48.26	16,297	51.74	31,496	30.10	38,032	30.28
35-65 Year Olds	23,278	47.99	25,229	52.01	48,507	46.35	54,433	43.34
Missing Age							2,204	2.02
Offense								
Public Consumption	33,118	47.15	37,117	52.85	70,235	67.11	84,006	66.89
Unreasonable Noise	851	66.48	429	33.52	1,280	1.22	1,555	1.24
Parks Offenses	10,515	63.93	5,933	36.07	16,448	15.72	19,622	15.62
Littering	863	39.79	1,306	60.21	2,169	2.07	2,434	1.94
Public Urination	6,685	46.04	7,834	53.96	14,519	13.87	17,965	14.31
Missing Offense							0	0.00
Borough of Issuance								
Manhattan	9,749	47.06	10,966	52.94	20,715	19.79	27,481	21.88
The Bronx	12,413	49.33	12,750	50.67	25,163	24.04	29,121	23.19
Brooklyn	14,492	47.1	16,278	52.9	30,770	29.40	36,279	28.89
Queens	10,955	48.16	11,793	51.84	22,748	21.74	26,951	21.46
Staten Island	4,423	84.17	832	15.83	5,255	5.02	5,750	4.58
Missing Issuing Borough							0	0.00
Residence								
County Resident	41,660	49.02	43,328	50.98	84,988	81.21	89,125	81.17
County Non-Resident	10,372	52.75	9,291	47.25	19,663	18.79	20,680	18.83
Non-NYC Resident							11,301	9.01
Missing Residency Data							4,903	3.90

Notes:
Data Source: Office of Court Administration
This table reports descriptives for the CJRA criminal summons sample with no missing data included in the regression. The last two columns report descriptives for all CJRA criminal summonses issued by NYPD in 2016.

Table 2. Civil Court Appearance Descriptives, Regression and Full Sample

	Regression Sample						Full Civil Court Sample	
	Appeared		Failed to Appear					
	N	*%*	*N*	*%*	Total	% Total	Total	% Total
Appearance								
Appearance	11,628	46.09	13,600	53.91	25,228	100.00	49,476	100
Sex								
Males	9,667	45.16	11,741	54.84	21,408	84.86	41,538	83.96
Females	1,961	51.34	1,859	48.66	3,820	15.14	7,447	15.05
Missing Sex							491	0.99
Age								
16-17 Year Olds	305	61.74	189	38.26	494	1.96	866	1.75
18-20 Year Olds	1,014	52	936	48	1,950	7.73	3,864	7.81
21-24 Year Olds	1,743	50.25	1,726	49.75	3,469	13.75	7,349	14.85
25-34 Year Olds	3,734	47.07	4,199	52.93	7,933	31.45	15,233	30.79
35-65 Year Olds	4,832	42.45	6,550	57.55	11,382	45.12	21,082	42.61
Missing Age							1,082	2.19
Offense								
Public Consumption	6,866	42.81	9,173	57.19	16,039	63.58	32,287	65.26
Unreasonable Noise	142	54.83	117	45.17	259	1.03	641	1.30
Parks Offenses	2,881	56.34	2,233	43.66	5,114	20.27	9,219	18.63
Littering	269	36.65	465	63.35	734	2.91	1,426	2.88
Public Urination	1,470	47.7	1,612	52.3	3,082	12.22	5,903	11.93
Missing Offense							NA	0.00
Borough of Issuance								
Manhattan	3,003	45.32	3,623	54.68	6,626	26.26	13,265	26.81
The Bronx	1,999	41.59	2,807	58.41	4,806	19.05	9,558	19.32
Brooklyn	3,979	52.02	3,670	47.98	7,649	30.32	13,816	27.92
Queens	2,494	43.88	3,190	56.12	5,684	22.53	10,641	21.51
Staten Island	153	33.05	310	66.95	463	1.84	1,173	2.37
Missing Issuing Borough							1,023	2.07
Residence								
County Resident	8,440	44.91	10,353	55.09	18,793	74.49	21,306	43.06
County Non-Resident	3,188	49.54	3,247	50.46	6,435	25.51	7,262	14.68
Non-NYC Resident							3,481	7.04
Missing Residency Data							17,427	35.22

Notes:
Data Source: Office of Administrative Trials and Hearings
This table reports descriptives for the CJRA civil summons sample with no missing data included in the regression. The last two columns report descriptives for all CJRA civil summonses issued by NYPD from June 13, 2017 - June 12, 2018

Results

Descriptive Statistics

The composition of the criminal (pre-CJRA) and civil (post-CJRA) summonses samples analyzed in the logistic regression analyses were generally similar by demographics, geography, and offense type (see Tables 1 and 2). The sample of individuals issued criminal and civil summonses was overwhelmingly male (89% criminal; 85% civil) and over the age of 35 years old. Among the race data available (i.e., in the civil summons only), the sample was mostly Black or Hispanic White individuals (each accounting for about one-third of the sample). Brooklyn was the borough where the largest number of summonses were issued among both samples (29% criminal; 30% civil), while Staten Island was the lowest (5% criminal; 2% civil). The vast majority of New York City residents who were issued a summons were residents of the county where their summons was issued (81% criminal; 74%

civil). The most common CJRA behavior for which a summons was issued was public consumption of alcohol (67% criminal; 64% civil), while the least common was unreasonable noise (1% for both samples).

Appearance Rates by Court Site

Table 3 reports court appearance rates by offense among the criminal and civil samples. Overall court appearance rates were slightly higher for criminal summonses issued before CJRA went into effect (51% appeared) relative to the appearance rate for civil summonses issued after implementation (47% appeared), but this trend varied by offense type. Court appearance rates were higher for civil summonses, relative to criminal summonses, for public urination (48% criminal vs. 50% civil) and littering (40% criminal vs. 48% civil). Appearance rates were lower for civil summonses, compared to criminal summonses, for the remaining three offenses—public consumption of alcohol (49% criminal vs. 42% civil), unreasonable noise (67% criminal vs. 56% civil), and parks offenses (64% criminal vs. 55% civil).

Table 3: Appearance Status for CJRA Summonses by Offense in Criminal and Civil Courts

	Criminal Summonses (Pre-CJRA)					Civil Summonses (Post-CJRA)					
	Appeared in Court		Failed to Appear		Total	Appeared in Court		Failed to Appear		Total	
Total	*n*	*%*	*n*	*%*	*n*	*n*	*%*	*n*	*%*	*n*	
Appearance Status	64,557	50.98	62,065	49.02	109,805	28,568	47.11	32,075	52.89	60,643	
Offense											
Public Consumption of Alcohol	41,103	48.64	43,397	51.36	84,500	13,651	42.06	18,803	57.94	32,454	
Unreasonable Noise	1,044	67.14	511	32.86	1,555	364	56.00	286	44.00	650	
Parks Offenses	12,806	63.92	7,229	36.08	20,035	9,495	54.94	7,787	45.06	17,282	
Littering	989	40.40	1,459	59.60	2,448	1,334	47.93	1,449	52.07	2,783	
Public Urination	8,615	47.64	9,469	52.36	18,084	3,723	49.84	3,747	50.16	7,470	

Notes:
Pre-CJRA sample includes all summonses issued between January 1, 2016 and December 31, 2016. Post-CJRA sample includes all civil summonses issued between June 13, 2017 and June 12, 2018.
Data Sources: Office of Court Administration and Office of Administrative Trials and Hearings

Regression Results

Criminal Summonses - pre-CJRA. Table 4 presents the odds ratios and 95% confidence intervals for logistic regression models predicting court appearance for criminal summonses issued before the implementation of CJRA. Results of the full model indicate that female recipients (OR = 1.161, p < 0.001) were more likely to appear in court than males. Age

was also a significant predictor of court appearance, with likelihood of appearing in court being the highest among the youngest age group. While 16-17 year olds were more likely to appear in court (OR = 1.305, p < 0.001), 25-34 year olds were less likely to appear in court (OR = 0.973, p < 0.05) than the oldest age group (35-65 year olds). In comparison to court appearance

for public consumption of alcohol summonses, summons recipients were significantly more likely to appear in court for parks offenses (OR = 1.860, p < 0.001) and unreasonable noise (OR = 2.342, p < 0.001) and were less likely to appear in court for littering (OR = 0.703, p < 0.001). No significant difference was found for court appearance for public urination compared to public consumption of alcohol summonses.

Court appearance was significantly higher in the four other New York City counties relative to Manhattan. Summons recipients in Staten Island were over six times more likely to appear in court (OR = 6.417, p < 0.001), while the Bronx, Brooklyn, and Queens were between 1.1 and 1.5 times more likely to appear in court (p < 0.001). Summons recipients who were residents of the county where the summons was

issued were significantly less likely to appear in court (OR = 0.811, p < 0.001). With regards to the neighborhood-level indicators, individuals living in neighborhoods with higher levels of concentrated disadvantage were significantly less likely to appear in court (OR = 0.851, p < 0.001). Conversely, living in neighborhoods with increased residential stability (OR = 1.006, p < 0.001) and foreign born residents (OR = 1.002, p < 0.01) were both more likely to appear with small effects.

We also utilized McFadden's pseudo R-squared to estimate the goodness-of-fit for each model. While various predictors were significantly related to likelihood of court appearance, it should be noted that the full model only explained about four percent of the variance in court appearance in criminal summons courts.

Table 4. Predictors of Court Appearance for Pre-CJRA Criminal Summonses

	Step 1	Step 2	Step 3	Step 4
Sex				
Female	1.217***	1.157***	1.151***	1.161***
	(1.178, 1.257)	(1.116, 1.197)	(1.110, 1.192)	(1.119, 1.202)
Age group				
16-17 Years Old	1.772***	1.359***	1.343***	1.305***
	(1.687, 1.856)	(1.271, 1.446)	(1.254, 1.431)	(1.216, 1.394)
18-20 Years Old	1.511***	1.214***	1.198***	1.171***
	(1.463, 1.559)	(1.163, 1.264)	(1.147, 1.250)	(1.120, 1.223)
21-24 Years Old	1.146***	1.045**	1.057***	1.044**
	(1.109, 1.184)	(1.007, 1.083)	(1.018, 1.096)	(1.005, 1.083)
25-34 Years Old	1.006	0.979	0.978	0.973*
	(0.978, 1.035)	(0.950, 1.008)	(0.949, 1.007)	(0.944, 1.002)
Offense Type				
Littering		0.728***	0.698***	0.703***
		(0.640, 0.815)	(0.609, 0.787)	(0.613, 0.792)
Parks Offenses		1.860***	1.868***	1.860***
		(1.823, 1.897)	(1.831, 1.906)	(1.822, 1.898)
Public Urination		0.970*	0.991	0.987
		(0.934, 1.006)	(0.954, 1.027)	(0.951, 1.024)
Unreasonable Noise		2.185***	2.331***	2.342***
		(2.068, 2.302)	(2.213, 2.449)	(2.223, 2.460)
Borough of Issuance				
The Bronx			1.287***	1.487***
			(1.249, 1.326)	(1.444, 1.530)
Brooklyn			1.119***	1.134***

			(1.082, 1.156)	(1.097, 1.172)
Queens			1.138***	1.062***
			(1.098, 1.177)	(1.018, 1.105)
Staten Island			6.702***	6.417***
			(6.622, 6.783)	(6.335, 6.499)
Resident County of Issuance			0.809***	0.811***
			(0.776, 0.842)	(0.778, 0.844)
Concentrated Disadvantage				0.851***
				(0.829, 0.872)
% Residential Stability				1.006***
				(1.004, 1.008)
% Limited English Proficiency				0.999
				(0.997, 1.001)
% Foreign Born				1.002**
				(1.000, 1.004)
Constant	0.908***	0.868***	0.840***	0.593***
	(0.890, 0.926)	(0.849, 0.888)	(0.801, 0.878)	(0.470, 0.717)
McFadden's Pseudo R2	0.004	0.014	0.035	0.037
Observations	104,651	104,651	104,651	104,651
Log Likelihood	-72,230.13	-71,530.71	-70,007.35	-69,866.11
Akaike Inf. Crit.	144,472.30	143,081.40	140,044.70	139,770.20

Notes: *$p<0.05$; ** $p<0.01$;***$p<0.001$
1. Includes all criminal summonses issued for CJRA behaviors by NYPD in 2016 with no missing data.
2. Table report odds ratios and 95% confidence intervals.

Civil Summonses - post-CJRA. Table 5 presents logistic regression models predicting court appearance for civil summonses issued after the implementation of CJRA. The results for each step of the model, including the same sets of variables as the criminal summons model, are reported in Steps 1-4. The race/ethnicity of the summons recipient variables were added in Step 5. In the full model, females were more likely to appear in court than males ($OR = 1.184$, $p<0.001$). The only age group that significantly differed in likelihood of appearance in comparison to 35-65 year-olds were 16-17 year-olds ($OR = 1.472$; $p <0.001$). Compared to summonses for public consumption of alcohol, individuals issued summonses for littering ($OR = 0.845$, $p < 0.01$) were significantly less likely to appear in court. Individuals issued summonses for parks offenses ($OR = 1.544$, $p < 0.001$), public urination ($OR = 1.256$, $p < 0.001$), and unreasonable noise ($OR = 1.832$; $p < 0.001$) were more likely to appear in court than those issued summonses for public consumption of alcohol. Asian/Pacific Islander summons recipients were more likely to appear in court ($OR = 1.305$, $p < 0.001$) than non-

Hispanic White summons recipients. Hispanic Black ($OR = 0.561$, $p<0.001$) and Hispanic White ($OR = 0.568$, $p<0.001$) recipients were both less likely to appear in court than non-Hispanic White recipients, and non-Hispanic Black individuals were the least likely to appear in court ($OR = 0.371$, $p <0.001$). There was no significant difference in likelihood of court appearance for American Indian/Alaskan relative to non-Hispanic White individuals

The odds of court appearance were higher for summonses issued in the Bronx ($OR = 1.342$, $p < 0.001$) and Brooklyn ($OR = 1.492$, $p < 0.001$) relative to those issued in Manhattan, and those issued summonses in Staten Island were less likely to appear in court ($OR = 0.639$, $p < 0.001$). There was no significant difference in court appearance for individuals issued summonses in Queens in comparison to Manhattan. Those issued summonses in their county of residence were over 15% less likely to appear ($OR = 0.841$, $p < 0.001$). At the neighborhood-level, being a resident of an area with higher concentrated disadvantage ($OR = 0.899$, $p < 0.001$) and larger percentages of residents who reported

limited English proficiency ($OR = 0.995$, $p < 0.01$) was related to a lower likelihood of court appearance. However, living in a neighborhood with higher levels of residential stability ($OR = 1.007$, $p < 0.001$) was related to an increased likelihood of appearing in court.

The size and direction of most relationships were similar in the Step 4 model and the final (Step 5) model, which included race/ethnicity. Notably, the effect size of concentrated disadvantage after accounting for race/ethnicity increased, and the
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direction of the relationship between the proportion of zip code residents with limited English proficiency and court appearance changed. The change in the direction of this effect suggests limited English proficiency in a neighborhood is related to lower rates of court appearance after accounting for differences in this outcome by race/ethnicity. Similar to the criminal summons models, the full set of predictors in the post-CJRA model accounted for a small proportion (about four percent) of the variance in court appearance

Table 5. Predictors of Court Appearance for Post-CJRA Civil Summonses

	Step 1	Step 2	Step 3	Step 4	Step 5
Sex					
Female	1.218***	1.202***	1.194***	1.196***	1.184***
	(1.148, 1.288)	(1.131, 1.273)	(1.123, 1.265)	(1.124, 1.268)	(1.111, 1.257)
Age group					
16-17 Years Old	2.129***	1.749***	1.760***	1.687***	1.472***
	(1.943, 2.314)	(1.559, 1.938)	(1.569, 1.950)	(1.496, 1.878)	(1.278, 1.666)
18-20 Years Old	1.432***	1.217***	1.211***	1.179***	1.046
	(1.335, 1.529)	(1.117, 1.318)	(1.109, 1.312)	(1.077, 1.281)	(0.942, 1.150)
21-24 Years Old	1.343***	1.271***	1.234***	1.206***	1.042
	(1.266, 1.419)	(1.193, 1.348)	(1.156, 1.313)	(1.127, 1.284)	(0.961, 1.122)
25-34 Years Old	1.194***	1.165***	1.133***	1.118***	1.023
	(1.136, 1.251)	(1.107, 1.223)	(1.075, 1.192)	(1.059, 1.177)	(0.963, 1.084)
Offense Type					
Littering		0.762***	0.803***	0.823**	0.845**
		(0.608, 0.916)	(0.649, 0.958)	(0.668, 0.979)	(0.688, 1.002)
Parks Offenses		1.596***	1.605***	1.592***	1.544***
		(1.530, 1.663)	(1.537, 1.673)	(1.523, 1.660)	(1.474, 1.614)
Public Urination		1.254***	1.237***	1.237***	1.256***
		(1.177, 1.332)	(1.159, 1.316)	(1.158, 1.316)	(1.176, 1.336)
Unreasonable Noise		1.599***	1.697***	1.834***	1.832***
		(1.352, 1.847)	(1.449, 1.945)	(1.585, 2.083)	(1.581, 2.084)
Borough of Issuance		1.599***	1.697***	1.834***	1.832***
The Bronx			1.034	1.347***	1.342***
			(0.955, 1.113)	(1.258, 1.436)	(1.252, 1.431)
Brooklyn			1.450***	1.538***	1.492***
			(1.381, 1.518)	(1.467, 1.609)	(1.420, 1.564)
Queens			1.047	1.035	1.013
			(0.972, 1.122)	(0.953, 1.117)	(0.928, 1.097)

Staten Island			0.701***	0.720***	0.639***
			(0.498, 0.904)	(0.513, 0.926)	(0.429, 0.850)
Resident County of Issuance			0.849***	0.826***	0.841***
			(0.789, 0.909)	(0.766, 0.887)	(0.779, 0.902)
Concentrated Disadvantage				0.747***	0.899***
				(0.706, 0.789)	(0.855, 0.943)
% Residential Stability				1.002	1.007***
				(0.998, 1.006)	(1.003, 1.011)
% Limited English Proficiency				1.006***	0.995***
				(1.002, 1.009)	(0.991, 0.998)
% Foreign Born				0.999	1.002
				(0.995, 1.002)	(0.999, 1.005)
Race/ethnicity					
American Indian/Alaskan					1.137
					(0.792, 1.482)
Asian/Pacific Island					1.305***
					(1.171, 1.440)
Black					0.371***
					(0.288, 0.455)
Hispanic Black					0.561***
					(0.450, 0.672)
Hispanic White					0.568***
					(0.487, 0.650)
Constant	0.722***	0.662***	0.669***	0.661***	0.845
	(0.684, 0.760)	(0.620, 0.704)	(0.598, 0.739)	(0.433, 0.890)	(0.610, 1.079)
McFadden's Pseudo R2	0.006	0.012	0.018	0.024	0.046
Observations	25,228	25,228	25,228	25,228	25,228
Log Likelihood	-17,312.18	-17,193.57	-17,092.90	-16,992.06	-16,610.15
Akaike Inf. Crit.	34,636.37	34,407.14	34,215.80	34,022.11	33,268.31

Notes:
$*p<0.05$; ** $p<0.01$;*** $p<0.001$
1. Includes all criminal summonses issued for CJRA behaviors by NYPD in 2016 with no missing data.
2. Table report odds ratios and 95% confidence intervals.

Comparing models. Females and younger individuals were significantly more likely to appear in court than males and older summons recipients in both criminal and civil courts. With regards to offense type, individuals were least likely to appear for littering summonses in both court systems. They were also more likely to appear in court for parks offenses and unreasonable noise offenses in comparison to public consumption of alcohol charges. While residents issued summonses in most counties were more likely to appear in court than those issued summonses in Manhattan, there were differences in the likelihood of court appearance for criminal versus civil summonses issued in Staten Island. Among the criminal summons sample, summonses issued in Staten Island were more likely to result in a court appearance, while appearance was less likely among the civil summons sample. Across both models, those issued summonses in their county of residence were less likely to appear in court.

Findings across both court systems suggest that living in a neighborhood with higher levels of concentrated disadvantage is related to a decreased likelihood of court appearance, while living in a neighborhood with greater residential stability is

related to increased likelihood of court appearance. Differences in direction and significance across models were seen regarding how the percentage of residents who reported limited English proficiency and foreign born impacted the likelihood of court appearance. Given the apparent interaction of race/ethnicity with the limited-English proficiency measure in the civil summons model, it is possible these findings may differ for the criminal summons sample if the analysis had accounted for race/ethnicity.

Sensitivity Analyses. Three sensitivity tests were conducted to examine the robustness of our findings. First, a matched sample of criminal and civil summonses was produced using the exact match function in the MatchIt package in *R*. Matching techniques are useful for comparing outcomes among nonrandomized samples of cases and have been employed in previous research examining how pretrial release and bond type relate to odds of failure to appear

(Clipper, Morris, & Russell-Kaplan, 2017; Helland & Tabarrok, 2004). Civil summonses were matched to criminal summonses by same offense type, borough of issuance, sex and age group of the recipient, and whether the summons was issued in the borough where the recipient lives. All civil summonses were matched with one or more criminal summonses, and all criminal summonses that matched exactly with a civil summons were retained in the analysis sample. The same logistic regression model was run on this matched sample, with the addition of a dummy variable distinguishing civil and criminal summonses. This analysis allowed further examination of the first hypothesis regarding the relationship between summons type (criminal vs. civil) on the likelihood of court appearance.[7] The findings are reported in Table 6.

Table 6. Predictors of Court Appearance Among Matched Sample of Criminal and Civil Summonses

Summons Type	
Civil	0.820***
	(0.792, 0.848)
Sex	
Female	1.238***
	(1.203, 1.273)
Age group	
16-17 Years Old	1.503***
	(1.400, 1.607)
18-20 Years Old	1.221***
	(1.172, 1.271)
21-24 Years Old	1.091***
	(1.055, 1.128)
25-34 Years Old	1.030**
	(1.003, 1.057)
Offense Type	
Littering	0.775***
	(0.695, 0.855)
Parks Offenses	1.839***
	(1.806, 1.871)
Public Urination	1.061***
	(1.025, 1.097)

Unreasonable Noise	2.590***
	(2.457, 2.723)
Borough of Issuance	
The Bronx	1.470***
	(1.429, 1.511)
Brooklyn	1.273***
	(1.240, 1.306)
Queens	1.026
	(0.987, 1.064)
Staten Island	3.536***
	(3.437, 3.636)
Resident County of Issuance	0.796***
	(0.767, 0.825)
Concentrated Disadvantage	0.808***
	(0.788, 0.827)
% Residential Stability	0.999
	(-0.997, 1.000)
% Limited English Proficiency	1.002***
	(1.001, 1.004)
% Foreign Born	1.002**
	(1.000, 1.004)
Constant	0.833***
	(0.723, 0.944)
McFadden's Pseudo R2	0.022
Observations	119,233
Log Likelihood	-82,072.26
Akaike Inf. Crit.	164,184.50

Notes: * $p<0.05$; ** $p<0.01$; *** $p<0.001$
1. Includes all civil CJRA summonses issued by NYPD from June 13, 2017 - June 12, 2018 with no missing data, and all exactly matching criminal summonses.
2. Table reports odds ratios and 95% confidence intervals

Rates of appearance among the matched sample of cases were similar to the appearance rates for the full sample of unmatched cases. The results suggested that the odds of court appearance were lower for civil summonses (OR=0.820, $p < 0.001$) relative to criminal summonses issued for the same offense (and matching on the additional matched variables). The effect of civil summons type on court appearance was small relative to the odds ratios for other individual and summons level variables, including recipient sex and age, borough of issuance, and offense type. The effect of neighborhood concentrated disadvantage (OR=0.808, $p < 0.001$) and residence of the county where the summons was issued (OR=0.796, $p < 0.001$) were also stronger predictors of court appearance than summons type in this analysis.

Second, we examined the small sample (n =4,328) of criminal summonses issued by NYPD officers for CJRA offenses in the first six months following implementation of CJRA. The appearance rate for this sample of summonses (48% appeared) was slightly lower than the appearance rate for the larger pre-CJRA sample of criminal summonses issued by NYPD (51% appeared). Many of the predictors of court appearance

for this post-CJRA sample were similar but were not statistically significant (likely due to smaller sample size and the relatively small effects).[8]

We also analyzed court appearance rates for a sample of summonses issued for two other criminal summonses offenses that were not impacted by the CJRA legislation—disorderly conduct and marijuana possession. Like the CJRA offenses, both disorderly conduct and marijuana possession are frequently cited as examples of quality of life enforcement, and these summonses continued to be issued as criminal summonses over the study period. This analysis examined court appearance rates for both offenses in 2016 ($n =34,205$), as well as for the first six months after the implementation of CJRA ($n=14,466$)[9] In 2016, 63% of disorderly conduct summonses and 66% of marijuana possession summonses resulted in a court appearance. In the post-CJRA time period, the appearance rate for disorderly conduct summonses remained 63% and was slightly lower (64%) for marijuana possession summonses than it had been in 2016. Logistic regression models using the same predictors of court appearance were run on the pre- and post-CJRA sample of summonses for these two offenses. The direction of significant relationships in these models were similar to those reported in Table 4, including the greater likelihood of appearance for females and individuals who received a summons in a different county than the one where they reside. The results similarly suggested that individuals living in zip codes with higher levels of concentrated disadvantage were significantly less likely to appear in court and that living in a zip code with greater residential stability and foreign-born residents were positively related to court appearance.

Discussion

Descriptive analysis of the population of summonses issued before and after CJRA went into effect suggests that the distribution of summonses by offense type, borough, and demographic characteristics of the recipient (by age and sex) was relatively stable before and after the implementation of CJRA. While prior research suggests that reform efforts to reduce punitiveness can unintentionally result in increased enforcement, these data suggest that there was less summons enforcement after the CJRA went into effect. This reduction is in line with a broader decline in lower-level enforcement occurring in New York City during the study period, including a similar proportional decline in the number of summonses issued for offenses not impacted by the CJRA. Our comparative analysis of summonses for disorderly conduct and marijuana possession suggests that rates of court appearance remained relatively

stable for summons offenses that remained in the criminal summons court during the study period.

The analyses revealed mixed support for the study hypotheses, including some surprising findings in how geography, demographic characteristics, and summons type (i.e., civil vs. criminal) were related to court appearance rates for summonses in New York City. The findings also suggest that the odds of court appearance are significantly associated with some characteristics of an individual's neighborhood of residence.

We posited that court appearance rates would be higher for criminal summonses relative to civil summonses issued for the same behavior, given the negative consequence of receiving a warrant for nonappearance in criminal summons court. This hypothesis was informed by a body of empirical research that suggests that the threat of warrant can encourage court appearance, including among a similar sample of summons recipients in New York City (Cooke et al., 2018). At the univariate level, appearance rates were not consistently higher for criminal summonses relative to civil summonses. While summonses issued for public consumption of alcohol, unreasonable noise, and parks offenses were more likely to result in a court appearance in criminal court, summonses for public urination and littering had higher appearance rates in civil court. However, a supplemental analysis examining how summons type (criminal vs. civil) related to likelihood of court appearance among a matched sample of CJRA summonses suggested that appearance rates were lower for civil summonses. We note that the effect of summons type (criminal vs. civil) was relatively small compared to the effect of individual and neighborhood characteristics on the likelihood of court appearance. The relatively small difference in appearance rates for civil and criminal summonses are in line with Bernal's (2017) suggestion that criminalization of failure to appear may not impact court appearance rates (p. 556). However, it may also support Cooke and colleagues' (2018) findings on text message reminders and may suggest that warrant consequences promote court appearance among recipients who are provided a reminder of this risk.

Court appearance, and conversely failure-to-appear, function differently in the criminal and civil summons courts. Responding to a criminal summons requires a physical appearance in court for most offense types, with the exception of public consumption and public urination, which can also be plead and paid via mail.[10] In contrast, civil summonses can (and frequently are) be resolved through payment online or in-person before the hearing. Civil summons recipients also have the option to request a remote hearing (online or via mail or phone) and can opt to

appear in court on or before the hearing date. While in-person court appearance is required to avoid a failure-to-appear for most criminal summonses, a relatively small proportion of respondents (under 10%) opt to appear in person for a civil summons hearing. Instead, the most common way that a civil summons for a CJRA offense is resolved is for the individual to pay the fine prior to the hearing date.

These findings have important implications in the context of the increasing use of non-custodial arrests and pretrial release. First, the similarity in court appearance rates across the two court sites suggests that bench warrants may not be essential for ensuring compliance with court requirements, at least in court contexts that simultaneously implement procedures to make compliance less burdensome. The additional flexibility built into the civil court adjudication process appears to play an important role in facilitating court appearance for lower-level offenses. Some of these options, such as flexible return dates or providing the option for remote hearings, could be incorporated into criminal courts sites.

Our findings on court appearance rates by demographic characteristics were similar to previous research (O'Keefe, 2007; Siddiqi, 2009; Zettler & Morris, 2015) in terms of higher appearance rates among females for both criminal and civil summonses and individuals who are White relative to Black or Hispanic among the civil summons (note race/ethnicity was not included in criminal summonses analyses). These racial and ethnic differences in appearance rates may be related to variation in perceptions of justice system fairness and confidence in the courts, which prior research has found varies by race and is predictive of likelihood of court appearance (Rottman, Hansen, Mott, & Grimes, 2003; Rottman & Tomkins, 1999). In contrast to prior research, this analysis demonstrated that younger individuals (especially 16-17 year olds) were more likely to appear compared to older individuals (35-65 years old). This finding may suggest that younger individuals are subject to the higher levels of social control (e.g., parents) and/or may be less constrained by other obligations (e.g., work, childcare) that make appearance more difficult (Bronstein et al., 2012).

In line with prior research (Bornstein et al., 2012; Siddiqi, 2009), the analysis also revealed variation in court appearance rates by offense type and by geography. The findings on the effect of borough where the summons was issued were largely consistent across the criminal and civil summons samples, with the exception of Staten Island. Appearance rates were significantly higher for criminal summonses issued in Staten Island relative to Manhattan, while they were significantly lower for civil summonses issued in that borough. This pronounced difference is surprising given that the civil and criminal summons courts are in close geographic proximity in this borough. Many of the other findings were also consistent across the criminal and civil summons samples, including significantly lower odds of appearance for summonses issued for littering (relative to public consumption of alcohol) and higher odds of appearance for summonses issued for parks and noise offenses.

The consistency in the effects of many predictors across criminal and civil court sites is notable given the differences in the appearance, adjudication, and warrant processes and suggests that there are likely persistent structural factors that inhibit and encourage court appearance. Relatedly, the analyses surprisingly revealed that the likelihood of court appearance was lower for individuals who lived in the county in which the summons was issued. This effect was consistent for criminal summonses (which generally require a physical court appearance in the issuing county) and civil summonses (which are more frequency paid remotely prior to the hearing date and also allow appearance at any of the five county courts). It is possible that this variable serves as a proxy of mobility and is likely associated with social and economic resources that make an individual more able to navigate the court system.

Finally, while effect sizes were small, some characteristics of an individual's neighborhood of residence were consistently related to the likelihood they will appear in court. Specifically, court appearance rates were lower for summonses issued to individuals who lived in neighborhoods with greater levels of disadvantage, and higher for individuals who live in neighbors with greater levels of residential stability in both court sites. Once accounting for race/ethnicity in the civil summons sample, a higher proportion of residents reporting English language proficiency was positively associated with court appearance. Taken together, these findings suggest that social and economic resources matter in facilitating court appearance.

Living in neighborhoods with less concentrated disadvantage and a higher proportion of residents who report English proficiency may indicate access to social resources such as willingness and ability to provide logistic support to facilitate appearance, knowledge about how to effectively navigate the court system, or even better neighborhood infrastructure for travel or legal assistance. The measure of neighborhood level concentrated disadvantage likely also serves as a proxy for an individual's own economic resources. Prior research suggests that indigence impacts court appearance (Zettler & Morris, 2015), potentially due to an individual's inability miss work in order to appear in court, bear the financial burdens associated with travel or childcare, or

potential anxiety about resolving a case that is likely to result in an associated fine. Notably, many of the changes made in the summons process through the adjudication in civil courts, including standardizing and reducing fines associated with these offenses, the ability to resolve a summons remotely or to appear in whichever court site is most convenient, and the option to complete onsite community service in lieu of a fine, are designed to address these barriers. It is possible that the relationship between neighborhood disadvantage and court appearance may be reduced, as community knowledge of these alternate adjudication options is diffused.

These findings reveal that court appearance rates vary systematically with some indicators of neighborhood resources and may suggest that nonappearance for summonses result from lack of financial wellbeing, social resources, or logistical support, rather than willful absconding. These findings support Gouldin's (2018) more nuanced conceptualization of nonappearance, which analytically separates true flight (in an attempt to avoid prosecution) from the larger proportion of "low-cost nonappearances" driven by logistical and practical issues or by inability to navigate the courts, confusion, fear of outcome, or lack of ability to pay (Gouldin, 2018). This is further evidenced in survey literature, which found that the most common reasons that individuals provided for their nonappearance were scheduling conflicts, work conflicts, and difficulties with transportation (Bornstein et al., 2012). Some scholars and advocates have critiqued the presumption that individuals who do not appear are either on the run or simply cannot manage their calendars, and suggest instead that they are usually the most vulnerable populations served by our criminal justice system (Bernal, 2017; Corey & Lo, 2019).

Conclusion

This study identified the impact of individual, incident, and neighborhood characteristics on the likelihood of court appearance for summonses issued for lower-level offenses in New York City. In line with existing research, court appearance varied significantly across demographic and incident-level measures. The findings also extend the existing scholarship with evidence that economic and social resource impact ability to make it to court and potentially that community investment outside of criminal justice system may be an important component of conversations about how to reduce failure to appear. Future research on efforts to improve court appearance would benefit from considering a root cause analysis approach to understanding court appearance and identifying the complex barriers that

individuals with fewer social and economic resources face in navigating court appearance in order to develop additional interventions to address these barriers.

There was relative consistency in the direction of these predictors across criminal and civil summons court sites and inconsistent findings regarding whether court appearance is more likely for the same summons offense type across the criminal and civil court sties. This research provides provisional evidence that the decriminalization of lower-level enforcement through a shift to civil adjudication and eliminating warrants for nonappearance may not systematically decrease rates of court appearance. While the analysis included a large number of significant predictors of court appearance, a relatively low proportion of variance in the outcome variable was explained in both the criminal and civil summons models. We therefore close with a call for additional research, as these findings suggest a large proportion of factors impacting court appearance is not explained in these models.

The growing body of work on court appearance would benefit from additional research that addresses the limitations of this study. First, this analysis relied on Census data at the ZCTA level to examine the effect of neighborhood of residence on court appearance. Future research examining the impact of neighborhoods would ideally draw on smaller geographic units that better reflect the social and geographic boundaries of neighborhoods as residents experience them. Given the cross-sectional nature of this work, we were able to identify the covariation of court appearance with the predictor variables but were not able to account for spurious effects and make causal inferences. Additional work analyzing longitudinal data could help specify the persistence and time order of relationships among variables of interest. Further, while the implementation of CJRA provided the opportunity to compare appearance rates for the same set of offenses in criminal and civil court, the quasi-experimental nature of this study does not allow us to disaggregate the role of the differential adjudication procedures (e.g., ability to pay online) from the elimination of warrant consequences in impacting the likelihood of court appearance for these offenses. Future research examining the impact of the elimination of bench warrants for some set of offenses for which the adjudication process otherwise remains the same could better address the important empirical question regarding the extent to which the threat of a warrant impacts court appearance. Finally, while the consistent relationship between neighborhood level concentrated disadvantage and court appearance is compelling, the data do not allow us to examine the independent impact of individual and neighborhood level resources. Future research drawing on data with

individual level indicators of financial well-being, social ties, and other resources, along with characteristics of their neighborhood of residence, could help distinguish the separate effects of these related factors.

We conclude with a confirmation that court appearance, especially for lower-level offenses, is an important, understudied, and timely topic. Rates of court appearance serve as an important metric, as research suggests that individuals with greater confidence in the legitimacy and fairness of the criminal justice system are more likely to appear (Bronstein et al., 2012). Scholars also note that our judicial system is diminished in effectiveness when individuals do not participate in it and that each nonappearance incident incurs associated losses in time and labor for the jurisdiction and collateral consequences for the individual who fails to appear (Bernal, 2017; Bornstein et al., 2012; Corey & Lo, 2019). Additional research in this area could provide valuable evidence to inform the national conversation on court appearance, especially in light of the expanding use of pretrial release, appearance tickets, and shifts toward civil enforcement of lower-level offenses

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Endnotes

[1] CJRA created a presumption that civil summonses should be issued for eligible charges and required the New York Police Department to develop a summons issuance policy that identifies specific exclusionary criteria that allow an officer to issue a criminal summons for a CJRA eligible charge. These exclusionary criteria include if the individual has two or more felony arrests in the past two years, has three of more unanswered civil summonses returnable to OATH in the past eight years, is on parole or probation; has an open warrant; the summons is being co-issued another summons for an offense that requires an appearance in criminal court; or the issuing officer articulates a legitimate law enforcement reason to issue a criminal summons (which is approved by a supervisor).

[2] While the ZCTAs are statistical approximations of USPS zip codes, they formally represent aggregations of census blocks in places where a majority of addresses have the same zip code. Many zip codes in New York City do not correspond to the same ZCTA number. The U.S. Census Bureau process for determining ZTCAs is somewhat complicated by the fact that several ZCTAs overlap counties within New York City and neighboring counties in Long Island (Nassau County) and Westchester (Yonkers).

[3] The vast majority of summonses issued for CJRA offenses were issued by NYPD in both periods. This includes 95% of criminal summonses pre-CJRA and 82% of civil summonses issued post-CJRA.

[4] We opted to utilize complete case analysis given the high proportion of missing data. Addressing missingness using multiple imputation is not recommended for samples with a large proportion of missing data (Jakobsen, Gluud, Wetterslev, & Winkel, 2017).

[5] In years prior to the study period, a small portion of warrants were issued for failure to pay fine/ complete sentence. OCA indicated this practice had ceased by 2016.

[6] This coding of nonappearance differs from the classification OATH uses to identify a summons as in "default," as summons are subject to a due process review for legal sufficiency (and potentially dismissed) prior to being labeled in default. Therefore, our measure of nonappearance includes a notably larger number of summonses than that those classified as in default at the administrative court.

[7] Because exact matching retains all control records that match a treatment record exactly, the regression analysis included weights that reflect the number of units in each subclass.

[8] In the post-CJRA criminal summons model, females and younger individuals were less likely to appear, but the age effect was only significant for 16-17 year-olds in comparison to 35-65 year olds. The differences in likelihood of

appearance by offense remained the same in the post-CJRA model in terms of both direction and significance, although public urination which was not significant in the 2016 model was in the 2017 model. There were fewer significant differences by county of issuance, although individuals who were issued summonses in Brooklyn were significantly more likely to appear than those issued summonses in Manhattan in 2016, but were significantly less likely to appear in 2017. Additionally, the effect of being issued a summons in Staten Island in comparison to Manhattan increased three-fold in 2017. The effect of resident of county of issuance remained the same from the pre- to the post-CJRA time period. Among neighborhood characteristics, only residential stability remained a significant predictor of increased likelihood of court appearance. While the direction of the effect of concentrated disadvantage and % foreign born residents remained the same, these effects did not achieve statistical significance in the 2017 model.

[9] Due to limitations in access to 2018 criminal summons data, this analysis only examined court appearances for these summonses for the first half of the post-CJRA period (June 13, 2017- December 31, 2017).

[10] Approximately 15% of criminal summonses for these two offenses were paid by mail in 2016 (DiFiore & Marks, 2018).