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The impact of criminal justice involvement: examining experiences in a housing first program.

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THE IMPACT OF CRIMINAL JUSTICE INVOLVEMENT: EXAMINING EXPERIENCES IN A HOUSING FIRST PROGRAM

By

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DEDICATION

To my best friend, David,

and Dexter, Gertrude, and Petunia.

Thank you for never giving up on me.

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ABSTRACT

THE IMPACT OF CRIMINAL JUSTICE INVOLVEMENT:
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Individuals who come into contact with the criminal justice system are more likely to experience housing instability and homelessness, which, in turn, increases the likelihood of subsequent criminal justice involvement. Due to a lack of federal funding, as well as disjointed and inconsistent policies regarding eligibility criteria, people with criminal records are unlikely to receive federal rental assistance. While the exclusion of people with criminal histories is presented as necessary to protect communities and residents from crime, improving access to stable housing may reduce recidivism, incarceration rates, and correctional costs and increase public safety.

The present study examined the differences between individuals with and without criminal justice involvement who participated in a Housing First program in Louisville, Kentucky. Between 2008 and 2017, Family Health Centers-Phoenix Health Care for the Homeless enlisted individuals with a history of chronic homelessness and co-occurring substance abuse and/or mental health disorder in the Louisville Housing First Program (LHFP). The 368 who completed an intake interview, were placed in housing, and did not enter the program more than once were included in the analyses.

Disparities in mental health and risky behavior were identified at earlier intervals of program exposure, but at 24 months, participants with criminal justice involvement at intake did not report more problems with mental health or risky behavior than their counterparts. Despite these improvements, participants with past criminal justice involvement were less likely to remain housed through LHFP and less likely to have a successful program outcome at 24 months compared to those without criminal histories. Criminal justice involvement at intake, social support, age, and education were significant predictors of housing outcomes at 24 months.

Rather than indicators of individual attributes, critical race theory suggests that these variables are structural predictors that may reflect the inequality embedded in the institutions and structures of our society, namely the education and criminal justice systems and the economy. Disparities in the criminal justice system are not due to disproportionate engagement in criminal activity, which calls into question normative expectations of justice, neutrality, fairness, and culpability and suggests that criminal justice involvement likely reflects the prevailing values and shortcomings of our society, as opposed to the character of those targeted by these biased practices. Therefore, rather than excluding individuals from housing assistance and other opportunities on the basis of their criminal justice involvement, such histories should be considered indicators of need.

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CHAPTER I

INTRODUCTION

Involvement with the criminal justice system, from traffic stops to incarceration, is not uncommon in the United States. In 2012, the number of Americans with a criminal record surpassed that of those with a four-year college degree (Friedman, 2015). More than 110 million adults, or nearly one in three Americans, have an arrest record (Goggins & DeBacco, 2018). Twenty-two percent of white males and 30 percent of African American males will be arrested by age 18 (Brame, Bushway, Paternoster, & Turner, 2014). In fact, more than 10 million individuals were arrested in 2018 alone (Federal Bureau of Investigation [FBI], 2019), and over 1.5 million are currently serving sentences in American prisons (Bronson & Carson, 2019). Notably, the incarceration rate among African American men (2,336 per 100,000) was nearly six times that of white men (397 per 100,000) in 2017 (Bronson & Carson, 2019). More than four million Americans are subject to probation supervision, and over 800,000 are subject to parole supervision (Kaeble & Cowhig, 2018).

Nearly 600,000 individuals are released from prison every year in the U.S. (Bronson & Carson, 2019), and housing instability and homelessness are more common among the formerly incarcerated (Couloute, 2018; Dyb, 2009; Geller & Curtis, 2011) and those with any type of criminal record (Ammann, 2000; Carey, 2005; Warren, 2019). Due to the disproportionate rate at which they come into contact with the criminal justice

system (Pager, Western, & Sugie, 2009; Wheelock & Uggen, 2006), people of color and economically marginalized individuals represent a larger portion of those facing the collateral consequences of criminal justice involvement (Alexander, 2010; Kaeble & Cowhig, 2018; U.S. Commission on Civil Rights [USCCR], 2019), which results in disparities in health, employment, income, and housing (Mauer & Chesney-Lind, 2002; Subramanian, Moreno, & Gebreselassie, 2014; Wacquant, 2010).

While mass incarceration disproportionately impacts urban neighborhoods and the racially and economically marginalized individuals who reside within them (Brewer & Heitzeg, 2008; Hinton, Henderson, & Reed, 2018), the rise of the prison-industrial complex (Schlosser, 1998) further exacerbates these disparities by diverting economic and political resources from cities to the rural communities where the majority of prisoners are incarcerated (Drake, 2011; Lawrence & Travis, 2004; Walker, Thorpe, Christensen, & Anderson, 2017). In order to house the exploding prison population, hundreds of prisons were built beginning in the 1980s, mostly in rural areas (Drake, 2011; Huling, 2002), which resulted in the dilution of minority voting power (i.e., prison-based gerrymandering; Drake, 2011; Kelly, 2012) and the reallocation of resources from predominantly minority, urban areas to predominantly white, rural areas (Bonds, 2013; Walker et al., 2017). Thus, individuals with criminal justice involvement, who are more likely to be people of color and who already face numerous collateral consequences, often return to marginalized communities with fewer resources, limited affordable housing, and extensive police surveillance (Brewer & Heitzeg, 2008; Walker et al., 2017).

Against this backdrop, the present study utilizes critical race theory to examine the experiences of participants with and without criminal justice involvement in the

Louisville Housing First Program (LHFP), a Housing First (HF) program based in Louisville, Kentucky serving individuals with a history of chronic homelessness[1] and a co-occurring substance abuse and/or mental health disorder. As discussed in detail in the next chapter, many of those with criminal justice involvement are excluded from federally subsidized housing assistance programs as a result of federally mandated restrictions and the discretion granted to local administrators of housing programs. By examining an urban housing assistance program that uses the HF model and accepts individuals regardless of their criminal background, it may be possible to shed light not only on how such individuals fare in a specific, federally supported housing assistance program, but also whether or not exclusions based on criminal justice involvement make sense for housing assistance programs in general. Thus, the present study addresses three primary research questions:

1. *Do LHFP participants with criminal justice involvement differ from those without criminal justice involvement at program onset?*
2. *Do LHFP participants with past criminal justice involvement differ from those without past criminal justice involvement at specific intervals of program exposure?*
3. *Does past criminal justice involvement among LHFP participants influence housing outcomes at 24 months?*

Using critical race theory as a framework, it is expected that LHFP participants with criminal justice involvement have markedly different experiences and outcomes when compared to their counterparts without criminal justice involvement.

[1] "Chronically homeless" means that, in addition to their disability, participants lived in "a place not meant for human habitation, a safe haven, or in an emergency shelter" for at least the past year or experienced four or more episodes of homelessness in the past three years, "as long as the combined occasions equal at least 12 months and each break in homelessness separating the occasions included at least seven consecutive nights" (24 C.F.R. §578.3). Stays in institutional care facilities, such as jails, substance abuse or mental health treatment facilities, and hospitals, that are less than 90 days do not count as stops in homelessness and are counted toward the total 12 months, as long as the individual was living in "a place not meant for human habitation, a safe haven, or an emergency shelter immediately before entering the institutional care facility" (24 C.F.R. §578.3).

Criminal Justice Involvement and Housing Access

Housing is a fundamental necessity (Anucha, 2005; Marcuse & Keating, 2006; National Low Income Housing Coalition [NLIHC], 2020) through which education and employment opportunities, social support, physical and mental health, and other important needs are met (Bratt, Stone, & Hartman, 2006; Durbin et al., 2018; Jaworsky et al., 2016; Poremski, Woodhall-Melnik, Lemieux, & Stergiopoulos, 2015). Obtaining adequate, stable housing is one of the most important determinants of successful reentry for those with criminal justice involvement (Council of State Governments [CSG], 2006; Pleggenkuhle, Huebner, & Kras, 2016; USCCR, 2019; Weiss, 2017) and one of the greatest challenges these individuals face (Herbert, Morenoff, & Harding, 2015; Petersilia, 2003). In the private rental market, landlords are often reluctant to accept tenants with criminal records (Clark, 2007; Evans & Porter, 2015; Helfgott, 1997). Helfgott (1997) surveyed property managers in Seattle, Washington and found that nearly one-half would be inclined to reject an applicant with a criminal conviction, citing community safety and a belief that ex-offenders had "bad values" (p. 20). Indeed, some advocate for the exclusion of those with criminal justice involvement from housing assistance programs for similar reasons (Walter, Viglione, & Tillyer, 2017).

Historically, public assistance programs have responded to limited resources by reserving access to individuals and families considered "worthy" of help (Del Casino & Jocoy, 2008; Dickson-Gomez, Convey, Hilario, Corbett, & Weeks, 2007; Piven & Cloward, 1971), and in the context of housing assistance, "we cannot talk about either the causes of or the solutions to homelessness without grappling with values, especially about who deserves what from whom, and who owes what to whom" (Burt, Aron, Lee, &

Valente, 2001, p. 324). Today, federal housing assistance policies focus on judgments regarding moral character, often using an individual's criminal background to determine worthiness (McCarty, Falk, Aussenberg, & Carpenter, 2016). In addition to criminal conviction and incarceration, relatively minor contact with the criminal justice system, such as an arrest that does not result in criminal charges, can impact an individual long after the event (Subramanian et al., 2014; Vallas & Dietrich, 2014). Criminal justice involvement does not automatically or categorically disqualify an individual from receiving federal housing assistance. Housing subsidies for homeowners, for example, do not consider criminal history at all, and federal *rental* assistance exclusions primarily target drug and violent offenses (McCarty et al., 2016).

Many of these policies were introduced in the late 1980s through the mid-1990s, at the height of the "tough on crime" era. Although violent crime rates peaked in the early 1990s (FBI, 2019), the rate of incarceration in the U.S. continued to increase steadily thereafter, as did the number of Americans with criminal records, who must contend with the collateral consequences of their criminal justice involvement (Freudenberg, 2001; Ghandnoosh, 2015; Kim & Kiesel, 2018). According to the Congressional Research Service, federal housing assistance exclusions against those with criminal justice involvement may serve four purposes: these restrictions attempt to (1) deter individuals from engaging in illegal activities; (2) punish undesirable behavior; (3) establish who is deserving (i.e., worthy) of assistance, given limited resources; and (4) protect communities from the aftermath of criminal activity (McCarty et al., 2016). The extent to which housing assistance exclusions achieve these goals, however, is a matter of debate.

Federal Housing Assistance Exclusions as Counterproductive

Although there may appear to be reasonable grounds for prohibiting those with criminal justice involvement from housing assistance programs, such restrictions aimed at this population may be counterproductive. That is, these exclusions do not achieve at least some of their intended purposes. Ironically, individuals with criminal justice involvement are likely among those most in need of housing assistance, given that this population tends to be concentrated in disadvantaged urban areas (Clear, 2007; Fontaine & Biess, 2012; Kirk, 2009, 2012; Kubrin & Stewart, 2006; La Vigne, Mamalian, Travis, & Visher, 2003; Lynch & Sabol, 2001) where access to affordable and available housing is scarce (Hammett, Roberts, & Kennedy, 2001; McDonald & Poethig, 2014).

At the same time, these individuals are more likely to encounter discrimination from private landlords (Clark, 2007; Evans & Porter, 2015; Helfgott, 1997) and have difficulty paying rent even if a relatively affordable rental unit is found, due to collateral consequences that negatively impact employment opportunities and income (Pager, 2003; Wacquant, 2010; Warren, 2019). One may think that those with criminal justice involvement could turn to federal housing assistance to help offset the cost of rental housing. However, the majority of federal housing subsidies benefit those with incomes over $100,000 (Fischer & Sard, 2017), and rental assistance programs that target low-income households, due to limited funding, cannot provide assistance to most of those in need, regardless of whether or not applicants have a criminal background[2] (Joint Center for Housing Studies [JCHS], 2018; McDonald & Poethig, 2014; NLIHC, 2020).

[2] Approximately 60 percent of federal housing expenditures benefit households with incomes over $100,000, and the seven million households with incomes over $200,000 receive a larger portion of federal housing subsidies than the 50 million with incomes below $50,000 (Fischer & Sard, 2017).

In addition to the inadequacies of federal rental assistance with respect to providing housing for low-income Americans in general, it appears that those with criminal justice involvement, in particular, are not commonly recipients of such assistance (Bradley, Oliver, Richardson, & Slayter, 2001; La Vigne & Parthasarathy, 2005; Warren, 2019). This may be due to prohibitions against those with criminal justice involvement, who would otherwise be eligible for housing assistance mandated by federal law, in addition to the discretion afforded to local public housing authorities (PHAs) and private landlords in admission and retention decision-making (Keene, Rosenberg, Schlesinger, Guo, & Blankenship, 2018). As discussed in the following chapter, decisions by local PHAs tend to be more restrictive than what is required by law, such that a wider range of criminal justice involvement over a longer lookback period[3] can result in denial of admission or eviction from housing, depending on location (Curtis, Garlington, & Schottenfeld, 2013; Lundgren, Curtis, & Oettinger, 2010; Purtle et al., 2020; Samuels & Mukamal, 2004).

It is not surprising that, in the face of these disjointed and inconsistent policies, a lack of awareness among those with criminal justice involvement regarding eligibility requirements and exclusion criteria discourages them from seeking housing assistance, as many (often incorrectly) believe that they are automatically ineligible for housing assistance programs or are uncertain about their eligibility (Bradley et al., 2001; Keene et al., 2018). Furthermore, individuals with criminal justice involvement who seek assistance in securing housing often report that decisionmakers view them less favorably due to their criminal backgrounds and see them as less deserving or worthy of help

[3] "Lookback period" refers to the timeframe during which an applicant's criminal history is considered. A lifetime ban, for example, would employ the longest lookback period (Crowell, 2017).

(Dickson-Gomez et al., 2007), which sometimes prompts them to seek out alternative (and often illicit) housing arrangements (Keene et al., 2018).

Due to the overwhelming barriers to housing assistance faced by those with criminal justice involvement, this population is at high risk for housing instability and homelessness, especially in urban areas (Bae, diZerega, Kang-Brown, Shanahan, & Subramanian, 2016; Pleggenkuhle et al., 2016). The homelessness rate among the formerly incarcerated is ten times that of the general public (Couloute, 2018), and individuals with histories of incarceration or who are experiencing homelessness are more likely to be racial minorities and are more likely to reside in urban areas (Geller & Curtis, 2011; Lee, Tyler, & Wright, 2010; NLIHC, 2020; Susser, Lin, & Conover, 1991; Wakefield & Uggen, 2010), where few rental units are affordable for those with extremely low incomes (McDonald & Poethig, 2014). Geller and Curtis (2011) analyzed longitudinal data from over 5,000 households located in 20 large cities across America and found that urban men with a history of incarceration were more likely to experience housing insecurity and homelessness compared to those who had never been incarcerated. Those with incarceration histories were also more likely to be minorities, had lower levels of education, were less likely to be employed, and were more likely to experience health issues and problems with substance abuse, differences that "would, even in the absence of incarceration, likely compromise their ability to remain stably housed" (Geller & Curtis, 2011, p. 1201).

Numerous additional studies have illustrated a link between having a history of criminal justice involvement and experiencing housing instability and homelessness (Keene et al., 2018; McKernan, 2017; Pleggenkuhle et al., 2016). This suggests that

housing assistance programs should target, rather than exclude, individuals with criminal justice involvement, which may also reduce the likelihood of repeat criminal justice involvement. While the exclusion of people with criminal histories is presented as necessary to protect communities and residents from crime, improving access to housing assistance may reduce future criminal justice involvement, thereby reducing crime and increasing public safety. In a study examining the experiences of over 200 men released from prisons and jails who returned to a large metropolitan city, La Vigne, Lloyd, and Debus-Sherrill (2009) concluded that access to stable and affordable housing facilitated employment opportunities and social support and resulted in fewer reports of substance abuse, subsequently reducing dependence on homeless shelters and future criminal justice involvement. Housing assistance programs have also been shown to reduce incarceration rates (Burt & Anderson, 2005; Culhane, Metraux, & Hadley, 2002), recidivism (Lutze, Rosky, & Hamilton, 2014; Steiner, Makarios, & Travis, 2015), and correctional costs (Hamilton, Kigerl, & Hays, 2015).

Likewise, research does not support the idea that excluding people with criminal justice involvement from receiving federal rental assistance promotes community safety. Criminal background does not appear to predict housing retention (Burt & Anderson, 2005; Clifasefi, Malone, & Collins, 2013; Malone, 2009; Tsai & Rosenheck, 2012), and there is evidence that after a period of three to eight years, ex-offenders are no more likely to be arrested than those without previous criminal justice involvement (Blumstein & Nakamura, 2009). Furthermore, experiencing homelessness after a period of incarceration can increase the likelihood of future contact with the criminal justice system (Nelson, Deess, & Allen, 1999). This suggests that the rationale for prohibiting

individuals with criminal justice involvement from receiving federal housing assistance in order to increase community safety and reduce crime may be unfounded and may, in fact, be counterproductive.

Finally, improving access to housing assistance programs for people with criminal histories can reduce taxpayer costs and decrease the burden placed on public service systems, especially in urban areas that experience higher rates of homelessness. For example, housing the homeless in emergency shelters is often more costly than providing transitional or permanent housing (Shinn, 2014; Spellman, Khadduri, Sokol, & Leopold, 2010; Thomas, Shears, Pate, & Preister, 2014). Having a stable place to live reduces an individual's use of public systems, such as hospitals, shelters, and correctional facilities, subsequently reducing public costs (Enterprise Community Partners, 2014). As urban areas increasingly acknowledge the widespread, deleterious effects of housing instability and homelessness, various efforts have been undertaken to assist the precariously housed and homeless without increasing the cost associated with these efforts. Housing First (HF) is one approach to addressing homelessness that may increase housing stability, improve health and quality of life among individuals experiencing homelessness, and "result in cost offsets that equal the cost of the intervention" (Ly & Latimer, 2015, p. 486; see also Larimer et al., 2009; Montgomery, Hill, Culhane, & Kane, 2014).

Housing Assistance Programs

Housing assistance in America began during the Great Depression as a way to stimulate the stagnant economy through the promotion of construction and resultant creation of jobs, while increasing the stock of affordable housing and improving conditions in urban housing (NLIHC, 2015; von Hoffman, 2000). Over time, the

American economy recovered, and with economic growth came increasing levels of inequality that have deeply divided the country (Bratt et al., 2006; Clark, 2016; Tilly, 2006). When public housing assistance was first introduced, a majority of Americans had incomes so low that they likely qualified for assistance, whether they received it or not[4].

Today, while the proportion of those with extremely low incomes may have decreased overall, more families are living in poverty or near-poverty (Dalaker, 2016), and as a result, these families face financial obstacles to obtaining housing as well as increased competition for the limited stock of affordable units (Byrne, Munley, Fargo, Montgomery, & Culhane, 2013). In 2017, nearly 40 percent of American adults reported struggling to meet basic needs, such as housing, utilities, food, and health care (Karpman, Zuckerman, & Gonzalez, 2018), while only one-fourth of low-income households that qualified for federal rental assistance actually received it (U.S. Department of Housing and Urban Development [HUD], 2017a). Accordingly, providing affordable housing for low-income households is the primary goal of most federal housing assistance programs today[5] (McCarty, Perl, & Jones, 2019).

In 2014, over 46 million Americans (about 15 percent) had incomes below the official poverty limit (Dalaker, 2016), and in 2018, 23 million people with low income (i.e., those earning less than 80 percent of local median income) spent over half their earnings on rent (Fischer, Rice, & Mazzara, 2019). At the same time, budget allocations

[4] Reliable data is not available prior to 1959; see Hurst (2007) and Ornati (1966).
[5] The majority of federal housing subsidies (over 75%) benefit households with incomes over $100,000 through the mortgage interest deduction, which cost taxpayers $66.7 billion in 2017 (Keightley, 2020). In 2011, nearly nine million homeowners made less than $50,000 and spent more than half of their income on housing, but these households received only three percent of the total amount spent on the mortgage interest deduction (Fischer & Huang, 2013). Homeownership subsidies cost more than three times the amount spent on rental assistance (Center on Budget and Policy Priorities, 2017). See Bourassa and Grigsby (2000) for an overview of the arguments for and against the mortgage interest deduction.

for HUD have been decreasing as a proportion of the total federal budget, from about seven percent in 1976 (Dolbeare & Crowley, 2002) to less than one percent in 2019 (Office of Management and Budget, 2020). Federal rental assistance programs serve approximately five million low-income families, more than two-thirds of whom are elderly, disabled, or children (HUD, 2019), but only 25 percent of qualifying households receive federal rental assistance (Fischer et al., 2019).

Federal Response to Homelessness

The first (and only) major federal law specifically created to address the problem of homelessness, the McKinney-Vento Homeless Assistance Act of 1987 (PL 100-77), aimed to create a system of "comprehensive homeless assistance" (Burt et al., 2002, p. xi), a goal that was never fully achieved (Hafer, 2017). One important accomplishment of the McKinney-Vento Act, however, was the creation of the U.S. Interagency Council on Homelessness (USICH), an independent agency within the executive branch responsible for coordinating state and local efforts to address homelessness (Clark, 2016). While the majority of early funds directed by the act went to providing emergency aid in the form of shelter and food, beginning in the 1990s, focus shifted away from triage and toward the elimination and prevention of homelessness (Rosenthal & Foscarinis, 2006). As evidence mounted that emergency shelters were not effective in reducing homelessness, the Continuum of Care[6] (CoC) approach was introduced to streamline federal, state, and local efforts of addressing the needs of individuals experiencing homelessness (Baker & Evans, 2016; Rosenthal & Foscarinis, 2006).

[6] "Continuum of Care" refers to a linear model of housing assistance but is also used to describe collaborative coalitions of homeless service providers that manage the local distribution of housing assistance grants, as mandated by HUD.

The CoC consisted of a linear, three-tiered approach to addressing homelessness consisting of emergency, transitional, and permanent housing and supportive services, whereby an individual experiencing homelessness must "complete" one step before progressing to the next (Couzens, 1997). Emergency shelters served as points of entry into the CoC, offering immediate, short-term housing and supportive services for people experiencing homelessness. The second stage consisted of transitional housing coupled with supportive services designed to prepare individuals to live independently within six months to two years. Finally, permanent supportive housing (PSH) emphasized long-term housing and the services necessary to maintain stable housing. The CoC approach commonly required those experiencing homelessness to abstain from using drugs and alcohol and to participate in case management and mental health treatment programs in order to receive housing (Baker & Evans, 2016). The CoC prioritized PSH placement for individuals with disabilities significant enough to hinder their ability to maintain stable housing while expecting most people experiencing homelessness to utilize transitional housing on a short-term basis before ultimately "transitioning" to unassisted housing (Wong, Park, & Nemon, 2006).

Housing First

The CoC represented a significant shift in the way homelessness was understood and addressed, and although this was overwhelmingly received as an improvement over previous approaches, it did not adequately respond to the needs of people experiencing homelessness (Gulcur, Stefancic, Shinn, Tsemberis, & Fischer, 2003; National Academies of Sciences, Engineering, and Medicine, 2018; Tsemberis, Gulcur, & Nakae, 2004). Due to the multilevel nature of the CoC model, coupled with the fact that housing

was tied to mandatory participation in supportive services and restrictions regarding personal behavior, individuals who were already precariously housed were required to move from emergency shelters to transitional housing before finally being placed in PSH (O'Campo et al., 2016; Padgett, Stanhope, Henwood, & Stefancic, 2011). The HF approach emerged in response to these issues, guided by the underlying belief that housing is a human right (Padgett et al., 2011) that should not be based on adherence to strict rules of behavior that do not apply to the general public (Baker & Evans, 2016). Pioneered by Sam Tsemberis, who implemented the first program of its kind in New York City in 1992, the HF approach has spread across the U.S., where its success has led to international implementation (Tsemberis & Asmussen, 1999; Woodhall-Melnik & Dunn, 2016).

According to HF, the most effective way to end homelessness is to first provide people with decent, stable housing, which can then serve as the foundation for substance abuse recovery, mental and physical health treatment, stable employment, and other important aspects of life (Tsemberis et al., 2004). Rather than mandating participation in supportive services, the HF approach emphasizes the importance of individual agency in breaking the cycle of homelessness (Barrow, McMullin, Tripp, & Tsemberis, 2007). At its most basic level, HF involves the allocation of permanent housing but can include "supportive housing, harm reduction and assertive community treatment" (Baker & Evans, 2016, p. 27). Because HF is not simply about providing housing, it may be more useful to consider it as a "policy field" (Peck & Theodore, 2015) rather than as any single philosophy, policy, or approach (Baker & Evans, 2016).

HF has been implemented in programs that target individuals who have been labelled as "difficult to serve" (i.e., those experiencing chronic homelessness and a disabling condition such as substance abuse or mental health disorder; Dennis, Locke, & Khadduri, 2007, p. 15). According to USICH, programs that adopt a HF approach recognize that "drug and alcohol use and addiction are part of some tenants' lives" (2016, p. 2). Compared to a program consistent with the CoC model, HF has been shown to be more effective at reducing substance abuse, despite the fact that participation in recovery programs is not mandatory, and HF participants were placed in housing sooner, were more likely to remain stably housed, and had a higher level of satisfaction with their housing situation (Tsemberis et al., 2004).

At the same time, the HF approach utilizes an eligibility determination process designed to remove barriers and connect participants with permanent housing regardless of their background, because all "people experiencing homelessness should have the right to self-determination and should be treated with dignity and respect" (HUD, 2014, p. 1). USICH asserts that programs that are appropriately utilizing HF should not discriminate against those with a history of criminal justice involvement (2016), and according to HUD, a core component of HF is that eligibility and admission requirements "are designed to 'screen-in' rather than screen-out applicants with the greatest barriers to housing" (2014, p. 2). HF represents an alternative to housing models, such as the CoC, that require participants to participate in and successfully complete short-term residential and treatment programs as a precondition to acquiring permanent housing (HUD, 2014); in other words, HF views all people as ready and deserving of safe, stable housing.

And yet, as discussed in the following chapter, many with criminal justice involvement are excluded from federally subsidized rental assistance programs. Consistent with a critical race theory perspective, housing exclusions for people with criminal justice involvement can be seen as one of many barriers embedded in the structure of our society, which are erected to maintain systems of oppression and subordination and disproportionately impact the economically marginalized and people of color. Because HF takes a distinct approach to serving people with criminal justice involvement, an opportunity exists to examine the experiences of HF participants with a history of criminal justice involvement alongside those without criminal histories. The purpose of the present study is to compare the experiences of formerly homeless individuals with and without criminal justice involvement within the context of Louisville Housing First Program (LHFP), in order to shed light on how criminal justice involvement impacts housing experiences and outcomes and whether or not prohibitions against these individuals are warranted.

Louisville Housing First Program

Based on the HF model, LHFP serves people in Louisville, Kentucky with histories of chronic homelessness who are disabled by a substance abuse and/or mental health disorder, facilitating the placement of these individuals in subsidized housing and providing supportive services in an effort to reduce homelessness. LHFP is administered by Family Health Centers-Phoenix Health Care for the Homeless (FHC-Phoenix), which is a federally designated Health Care for the Homeless provider that offers medical, dental, mental health, and social services to people experiencing homelessness. FHC-Phoenix is one division of Family Health Centers of Louisville, which is a multisite

Federally Qualified Community Health Center that serves the metro Louisville area. FHC-Phoenix received three grants from the Substance Abuse and Mental Health Services Administration (SAMHSA) to administer LHFP. The funding was intended to help individuals experiencing homelessness or housing insecurity who were also disabled by substance abuse, mental health, or both disorders.

LHFP primarily provides scattered-site (i.e., dispersed) housing placements for participants that allow them to rent units from private landlords, although some reside in local project-based housing. FHC-Phoenix receives HUD vouchers, including Section 8 Housing Choice and Shelter Plus Care (S+C) vouchers, which are distributed through Louisville's CoC and the Louisville Metro Housing Authority and utilized by LHFP participants to obtain rental units at fair market value. Case managers, peer support specialists, and housing providers work in tandem to help participants locate prospective rental units, apply for housing placement, and provide supportive services.

Consistent with HF, FHC-Phoenix does not exclude people with criminal justice involvement from participating in LHFP, but the program is subject to numerous federal requirements and restrictions. Individuals with a history of criminal justice involvement are eligible to receive S+C vouchers, but recipients are required to be chronically homeless and must receive case management in addition to housing placement. As discussed in detail in the following chapter, federal laws exclude people with certain types of criminal justice involvement from the Section 8 voucher program. At the same time, private landlords may decide whether or not to accept vouchers from applicants and are granted wide discretion with respect to eligibility criteria for prospective tenants

(McCarty et al., 2016), which makes housing placement for those with criminal justice involvement more complicated.

Plan for the Research

The remaining chapters focus on distinct areas related to this dissertation. The second chapter consists of a review of the literature, which examines three areas relevant to the present study. First, research that informs the intersection of housing assistance and criminal justice involvement is discussed. Second, policy and research regarding housing assistance exclusions faced by those with criminal justice involvement are described. Finally, critical race theory and its relevance to the present study is discussed. Chapter three provides an overview of the methodological foundation of this research. Chapter four presents the results of the statistical analyses. Chapter five summarizes the findings of the analyses of the three research questions, suggests directions for future research, acknowledges limitations, and considers corresponding policy implications.

CHAPTER II

LITERATURE REVIEW

This chapter reviews literature relevant to the present study. First, research that informs the intersection of housing assistance and criminal justice involvement is discussed. Second, policy and research regarding housing assistance exclusions faced by those with criminal justice involvement are described. The chapter concludes with an overview of critical race theory and its applicability to the present study.

Criminal Justice Involvement and Housing Access

Housing is a fundamental necessity (Anucha, 2005; Marcuse & Keating, 2006; NLIHC, 2020) through which education and employment opportunities, social support, physical and mental health, and other important needs are met (Bratt et al., 2006, Durbin et al., 2018; Jaworsky et al., 2016; Poremski et al., 2015). Obtaining adequate, stable housing is one of the most important determinants of successful reentry for those with criminal justice involvement (CSG, 2006; Pleggenkuhle et al., 2016; USCCR, 2019; Weiss, 2017) and one of the greatest obstacles these individuals, who often have low income and reduced employment opportunities (Pager, 2003; Wacquant, 2010; Warren, 2019), face (Herbert et al., 2015; Petersilia, 2003). This population also tends to be concentrated in disadvantaged urban neighborhoods (Clear, 2007; Fontaine & Biess, 2012; Kirk, 2009, 2012; Kubrin & Stewart, 2006; La Vigne et al., 2003; Lynch & Sabol, 2001; Roman & Travis, 2006), which tend to have fewer resources, limited affordable

housing, and extensive police surveillance (Brewer & Heitzeg, 2008; Hammett et al., 2001; McDonald &Poethig, 2014; Walker et al., 2017). People with criminal justice involvement are recognized as one of the populations most likely to experience housing instability and homelessness (Aspen Institute, 2020). Individuals with criminal justice involvement often must compete for shelter in an increasingly expensive rental housing market where 73 percent of low-income households are extremely rent burdened, spending over 50 percent of their income on housing (NLIHC, 2020). Further, households with at least one member with a criminal conviction tend to have lower incomes than those without any criminal convictions (Warren, 2019).

In addition, landlords in the private rental market are often reluctant to accept individuals with criminal justice involvement as tenants (Clark, 2007; Evans & Porter, 2015; Helfgott, 1997). Evans and Porter (2015) utilized a quasi-experimental audit design with matched pairs of tests who posed as prospective tenants and called landlords across New York State. Fewer than one-half (43%) of prospective tenants with criminal convictions (n = 485) received agreement from a landlord to view a residence, compared to 96 percent of those without criminal convictions (n = 485). It stands to reason that, due to these difficulties, people with criminal justice involvement would be likely to seek federal housing assistance.

Three primary direct housing assistance programs for individuals and families with low income are funded by the federal government. These programs offer housing to low-income households that cost no more than 30 percent of total household income (McCarty et al., 2016). The first is the public housing program, which provides federally subsidized, low-rent housing units, which are owned and administered by local PHAs (42

U.S.C. § 1437d). The second, the Section 8 Housing Choice Voucher program, offers rental vouchers, which are subsidized by the federal government but administered by local PHAs and are used to obtain housing in the private market (42 U.S.C. § 1437f(o)). The third is the Section 8 project-based rental assistance program, which provides low-rent housing units that are subsidized by the federal government and administered by private property owners, who may be for-profit or nonprofit entities (42 U.S.C. § 1437f).

The available literature suggests that access to housing assistance for people with criminal justice involvement may be limited for several reasons. First, there is a shortage of affordable housing units in the U.S. and, in particular, in cities, where people are more likely to have criminal justice involvement (Bradley et al., 2001; Clear, 2007; Kubrin & Stewart, 2006). Across the country, only 37 affordable housing units are available for every 100 extremely low-income renters (i.e., those with incomes below the official poverty threshold), which means that nationally, there is a shortage of seven million affordable housing units (NLIHC, 2020). This problem is even more pronounced in urban neighborhoods (McDonald & Poethig, 2014), where those with criminal justice involvement are forced to compete with households that do not have the mark of a criminal record.

Second, federally subsidized housing assistance programs that target those with low income have insufficient funding to meet the demands of the number of households that need help, regardless of whether or not applicants have a criminal background (JCHS, 2018; McDonald & Poethig, 2014; NLIHC, 2020). Because these programs are underfunded, three out of every four eligible low-income households are denied federal housing assistance (Fischer & Sard, 2017; NLIHC, 2020). In 2015, federal housing

assistance cost the federal government $190 billion, 60 percent of which went to households making over $100,00 a year (Fischer & Sard, 2017). In fact, the 7 million households with incomes over $200,000 receive a larger portion of federal housing subsidies than the more than 50 million with incomes below $50,000, despite the fact that low-income households are much more likely to struggle to afford housing (Fischer & Sard, 2017). Third, waiting lists for rental assistance programs are often long and may extend several years (Fontaine & Biess, 2012; Hammett et al., 2001; Keene et al., 2018). While the number of very low-income renters increased by more than 40 percent between 1995 and 2015, the number of low-income households receiving federal, state, or local housing assistance increased by only 12 percent (JCHS, 2018).

In addition to the inadequacies of federal housing assistance with respect to providing housing for low-income Americans in general, it appears that those with criminal justice involvement, in particular, are not commonly recipients of such assistance (Bradley et al., 2001; La Vigne & Parthasarathy, 2005; Warren, 2019). La Vigne and Parthasarathy (2005) conducted interviews with former inmates who recently returned to Chicago, at two to three months, six to nine months, and one to two years after release. Among the 145 former inmates who completed all three interviews, fewer than 10 percent were residing in public housing at the first and second interviews, and at one to two years post-release, only 10.4 percent were residing in public housing. Similarly, Bradley and colleagues (2001) utilized data from a survey that was administered at three prerelease facilities in the Boston area, with fewer than one-fourth of inmates reporting that they would seek housing assistance through the Boston Housing Authority upon release. More recently, in their project utilizing qualitative interviews,

Keene and colleagues (2018) found that only one out of 44 former inmates successfully obtained a lease for a HUD-subsidized housing unit over the entire three years of the study.

Warren (2019) considered the records of 10,509 households, which included 15,144 individuals, who resided in one of four properties owned by different nonprofit multifamily affordable housing providers in the Saint Paul, Minnesota area between March 2010 and June 2017. Fewer than 30 percent of these households included at least one adult with a prior criminal conviction, and seven percent had at least one felony conviction. Among those convicted, the most common offenses were property (10.4%), public order (36%), and driving while intoxicated or reckless driving (27%). Notably, arson, sex offenses, organized crime, extortion, racketeering, and blackmail were not considered in this study, as these offenses were considered "non-negotiable disqualifiers" according to the PHAs in the study (p. 22).

Indeed, local administrative decisions represent a fourth reason for limited access to housing assistance, which may be specific to those with criminal justice involvement. Local PHAs and nonprofit organizations that provide housing assistance often have wide discretion in admission and retention decisions with respect to criminal justice involvement, discretion which may contribute to this population's limited access to housing assistance (Lipsky, 1980). The discretionary power afforded to these local organizations has resulted in a wide range of eligibility criteria that varies by location, which may make it difficult for those with criminal justice involvement to locate, obtain, and retain housing assistance through such programs (Samuels & Mukamal, 2004). The discretion of caseworkers and other professionals within these local organizations may

pose additional barriers to housing for people with criminal histories. Lipsky (1980) asserted that a significant aspect of eligibility for public assistance relies on the discretion of service providers who "psychologically [simplify] their clientele and environment in ways that strongly influence the outcomes of their efforts" (p. xii).

Dickson-Gomez and colleagues (2007) conducted qualitative interviews with 65 individuals actively using heroin and cocaine, as well as interviews and focus groups with 15 housing caseworkers from local homeless service provider organizations. The researchers found that housing caseworkers exercised significant discretion when reviewing applications and serving existing clients. Active drug users often perceived this discretion as favoritism, whereby caseworkers' assessments of applicants and existing clients were based on a sense of deservingness or worthiness. It may be that the discretion afforded to PHAs and private landlords by the federal government, which is described by the interviewees in Dickson-Gomez and colleagues' (2007) study, negatively impacts people with criminal justice involvement, because they are often viewed by decisionmakers as less worthy of receiving the limited amount of housing assistance available (Del Casino & Jocoy, 2008).

Fifth, housing access may be limited by the prohibitions outlined in federal law against people with criminal justice involvement with respect to admission and retention in housing assistance programs. As discussed in detail in the following section, a criminal history does not always automatically or categorically disqualify an individual from receiving federal housing assistance, but a complex array of federal guidelines exists pertaining to criminal justice involvement (McCarty et al., 2016). Relatedly, there is evidence of misconceptions regarding eligibility for subsidized housing among those with

criminal records (Bradley et al., 2001; Keene et al., 2018), which may lead to a sixth reason for their limited access to housing assistance. Bradley and colleagues (2001) found that 62 percent of inmates were concerned about housing discrimination due to their criminal record, and the authors noted that many with criminal justice involvement held false impressions about their chances of obtaining federal housing assistance. When asked if they would legally be able to return to public housing following incarceration, 67 percent of inmates either did not know or incorrectly said that they could not do so. These misconceptions may prevent people with criminal justice involvement from seeking shelter through housing assistance programs.

Utilizing qualitative interviews, Keene and colleagues (2018) interviewed 44 former inmates who were convicted of nonviolent drug offenses and who were returning to New Haven, Connecticut in order to examine how those with criminal justice involvement attempted to obtain housing subsidies or join family already in assisted housing. Former inmates described two primary obstacles to obtaining housing subsidies, including scarcity of available housing assistance (e.g., several mentioned being on long waiting lists in New Haven or nearby areas) and specific eligibility restrictions associated with their criminal records. Discretion regarding enforcement of eligibility restrictions on a case-by-case basis was a challenge for many former inmates, as they were often uncertain about their ability to obtain housing subsidies or reside in assisted housing, given the freedom afforded to PHAs when considering criminal justice involvement. Some former inmates viewed this discretion favorably and attempted to use appeals, participation in programs, and narratives of rehabilitation as proof that they were worthy of assistance. Many former inmates maintained an official address elsewhere, while

secretly living with family or others in subsidized housing. As noted, only one former inmate received a HUD subsidy over the three years of the study, and only a few were able to access subsidized units leased to family or acquaintances. This suggests that discretion and the misconceptions surrounding it could lead to restricting rather than extending assistance to people with criminal justice involvement.

Given the difficulties faced by people with a history of criminal justice involvement in obtaining housing assistance and the low rate at which they receive assistance, several studies focus specifically on housing instability and homelessness among people with criminal justice involvement. Metraux and Culhane (2004) analyzed shelter use and incarceration history over time for 48,424 individuals who were formerly incarcerated and released from New York State prisons between 1995 and 1998. The authors analyzed shelter use data from the Department of Homeless Services in New York City and incarceration data from the New York Department of Correctional Services. A little more than 11 percent reported staying in a shelter within two years of their release, and more than one-half of these shelter stays occurred within the first month of their release.

Geller and Curtis (2011) used survey data from the Fragile Families study, focusing on housing insecurity among 1,052 fathers with incarceration histories and 1,584 fathers without incarceration histories in 20 large cities across the U.S. Nearly one-third of those formerly incarcerated experienced housing insecurity in urban areas, compared to 14 percent of fathers who were not incarcerated. The formerly incarcerated fathers were also more likely to be evicted, live in a shelter, move more than once a year, or miss a mortgage payment. Overall, they found that men in urban areas who were incarcerated

at some point in their lives were nearly twice as likely to encounter some type of housing insecurity (e.g., homelessness, eviction, or living with others but not paying rent) than those who were never incarcerated.

Housing insecurity can, in turn, lead to further criminal justice involvement, up to and including incarceration. Lutze and colleagues (2014) conducted a longitudinal outcome evaluation of Washington State's Reentry Housing Pilot Program (RHPP), which provided housing and supportive services to 208 former inmates at high risk of housing insecurity who were released between 2008 and 2011. Compared to a similar group of high risk, high need formerly incarcerated individuals who were not provided access to housing or supportive services, the RHPP participants had significantly lower rates of new convictions (22% vs. 36%) and returns to incarceration (37% vs. 56%). RHPP participants were significantly less likely to experience homelessness, and in both groups, periods of homelessness were found to significantly increase the risk of recidivism. Across both groups, experiencing homelessness created more than three times the risk for parole or probation revocation and two times the risk for future conviction and reincarceration.

Herbert and colleagues (2015) examined 3,681 individuals subject to parole supervision released from the Michigan Department of Corrections and their experiences with housing insecurity and homelessness, finding an inverse relationship between the time spent housed and the probability of moving. The parolees in the study moved an average of 2.6 times a year, and one-half of those moves occurred within the first eight weeks after release. Moreover, they found that "instability begets instability" (p. 20), in that moving once increases an individual's risk of subsequent moves. Mental illness, drug

and alcohol use, prior incarceration, and prior episodes of homelessness were predictors of greater residential instability.

Likewise, when compared to those who were unemployed, parolees who had a quarterly income of $6,000 or more had a 37 percent lower probability of moving, a 44 percent lower probability of becoming homeless, a 55 percent lower probability of inpatient treatment for substance abuse or mental health problems, a 61 percent lower probability of returning to prison, and a 74 percent lower probability of being sanctioned for violating the terms of their parole (i.e., intermediate sanctions). The authors also found that "the criminal justice system is a key player in generating residential instability" (Herbert et al., 2015, p. 20). Nearly 60 percent of all moves among parolees were due to intermediate sanctions, absconding, or forced moves (i.e., to treatment facilities or prison). At the same time, parolees who lived alone (a possible indicator of self-sufficiency) were least likely to move, experience homelessness, or return to prison. Similarly, living with parents or a romantic partner and returning to a former residence were associated with more residential stability.

These studies show the need for housing accommodations for individuals immediately following criminal justice involvement (Metraux & Culhane, 2004), in order to increase residential stability (Herbert et al., 2015) and decrease risk of recidivism (Lutze et al., 2014). Compared to those without criminal histories, people with criminal justice involvement are more likely to experience housing insecurity (Geller & Curtis, 2011), but recidivism rates can be significantly reduced if they are provided housing services (Lutze et al., 2014). However, as the next section illustrates, housing assistance

exclusions exist at the federal and local levels that may prevent people with histories of criminal justice involvement from obtaining such assistance.

Housing Assistance Exclusions

HUD oversees the three housing assistance programs described earlier in the chapter, and federal policies govern income eligibility and the manner in which tenant rent and subsidy level are determined (HUD, 2017b). At the same time, PHAs and private property owners have considerable discretion in establishing policies to screen applicants for suitability for admission to the program and for specific housing units (Samuels & Mukamal, 2004). Whether or not applicants are admitted to the public housing and Section 8 Housing Choice Voucher programs is determined by the PHAs that administer them, but landlords have their own eligibility criteria, which may differ from those of the PHAs. Under the Section 8 Housing Choice Voucher program, private landlords may use any criteria to evaluate applicants, assuming they do not violate federal, state, or local laws (McCarty et al., 2016). PHAs who serve as landlords for the public housing program may also utilize additional eligibility criteria for specific public housing developments. Finally, private property owners serve as program administrators and landlords for the Section 8 project-based rental assistance program and are responsible for evaluating prospective tenants for suitability for the program and tenancy (McCarty et al., 2016).

Federal law delineates numerous exclusions aimed at people with criminal justice involvement with respect to housing assistance programs. Guidelines differ regarding restrictions imposed on those seeking housing assistance and those who are already tenants. Although mandatory federal prohibitions exist, most exclusions merely establish potential causes for denial or eviction and are discretionary. Federal housing assistance

benefits are afforded to *households*; therefore, the backgrounds and histories of all household members are examined when evaluating applicants, except in cases where the disqualifying member is removed from the household. When reviewing current tenants in cases of criminal justice involvement, the actions of one family member or even a guest may jeopardize the entire household's ability to remain housed (McCarty et al., 2016). Table 1 highlights the mandatory and discretionary exclusions in federal policies aimed at applicants and current tenants with criminal justice involvement across the three primary direct housing assistance programs.

Restrictions for Applicants

Federal law outlines two mandatory prohibitions against particular types of criminal justice involvement. PHAs and property owners across all three direct housing assistance programs must deny applicants who have a duty to register as sex offenders for life under a state sex offender registration program (42 U.S.C. § 13663). No discretion is permitted in these cases. Likewise, individuals convicted of producing methamphetamine on the premises of federally subsidized housing must also be denied admission to the public housing and Section 8 Housing Choice Voucher programs (42 U.S.C. § 1437 n(f)(1)). No discretion is afforded to PHAs in these cases. These individuals are not automatically denied admission to the Section 8 project-based rental assistance program.

Beyond these mandatory federal prohibitions, PHAs and property owners across all three direct housing assistance programs are obligated by federal law to implement policies that allow them to deny admission to the programs, at their discretion, to households that include any of four types of applicants. The first is applicants who are currently engaging in illegal drug use, as determined by the administrator of the program

Table 1.

Federal policies denying applicants and terminating tenants with CJI

CJI Type	Public Housing	Housing Choice Voucher	Project-based Rental Assistance
Lifetime sex offender registration	MD	MD	MD
Conviction, methamphetamine production in federally assisted housing	MD MT	MD MT	
Drug-related criminal activity	DD DT	DD DT	DD DT
Violent criminal activity	DD	DD DT	DD
Criminal activity that interferes with health, safety, peaceful enjoyment of premises	DD DT	DD DT	DD DT
Current illegal drug use	DD DT	DD DT	DD DT
Abuse of drugs or alcohol that interferes with health, safety, peaceful enjoyment of premises	DD DT	DD DT	DD DT
Fugitive felon status	DT	DT	DT

Note: "MD" refers to mandatory denial of applicants; "DD" refers to discretionary denial of applicants; "MT" refers to mandatory termination of assistance and/or tenancy; and "DT" refers to discretionary termination of assistance and/or tenancy.
Adapted from McCarty et al. (2016).

to which they are applying (42 U.S.C. § 13661(b)(1)). The second category includes applicants whose illegal drug use or pattern of drug use interferes with the health, safety, or right to peaceful enjoyment of the premises by other residents, as determined by the administrator and based on reasonable cause (42 U.S.C. § 13661(b)(1)). The third category includes those whose abuse of alcohol or pattern of alcohol abuse interferes with the health, safety, or right to peaceful enjoyment of the premises by other residents, as determined by the administrator of the program and based on reasonable cause (42 U.S.C. § 13661(b)(1)). The final category includes applicants who have been evicted from federally assisted housing within the past three years for drug-related criminal activity, unless they completed a drug rehabilitation program or the circumstances leading to the eviction no longer exist (i.e., said tenant is no longer a member of the household; 42

U.S.C. §13661(a)). For the latter three categories, owners and PHAs may consider whether not applicants are participating in or have completed a supervised drug or alcohol rehabilitation program, and they may use this information to approve or deny applicants (42 U.S.C. §13661(b)(2)).

Other categories of criminal behavior may also be grounds for denial of admission to housing assistance programs. PHAs and property owners across all three programs may also deny admission to a household if a member is currently participating in or has been engaged in violent, drug-related, or other criminal activity that would negatively impact the health, safety, or right to peaceful enjoyment of the premises during a reasonable period of time (i.e., lookback period) prior to application (42 U.S.C. § 13661(c)). What constitutes a "reasonable" period of time is not defined by federal guidelines and is left to the discretion of PHAs and property owners (McCarty et al., 2016); the meaning of "reasonable" cause is similarly vague.

Restrictions for Tenants

PHAs are required to terminate assistance for any individual convicted of producing methamphetamines on the premises of federally assisted housing for tenants in the public housing and Section 8 Housing Choice Voucher programs (42 U.S.C. §1437n(f)(2)). In contrast, property owners are not required to automatically terminate tenancy in the Section 8 project-based rental assistance program in these cases, but they have the discretion to do so. In the case of a current tenant obligated to register as a sex offender for life under a state sex offender registration program, HUD strongly suggests, but does not mandate, that PHAs and property owners terminate assistance (HUD, 2009).

In addition to mandatory federal prohibitions, PHAs and property owners across all three direct housing assistance programs are obligated by federal law to implement policies that allow them to terminate assistance, at their discretion, to households that include any of three types of tenants. The first is tenants who are currently engaging in illegal drug use, as determined by the administrator of the program (42 U.S.C. § 13662 (a)(1)). The second category includes tenants whose illegal drug use or pattern of drug use interferes with the health, safety, or right to peaceful enjoyment of the premises by other residents, as determined by the administrator and based on reasonable cause (42 U.S.C. § 13662(a)(2)). The third category includes those whose abuse of alcohol or pattern of alcohol abuse interferes with the health, safety, or right to peaceful enjoyment of the premises by other residents, as determined by the administrator of the program and based on reasonable cause (42 U.S.C. § 13662(a)(2)). For the latter two categories, owners and PHAs may consider whether or not tenants are participating in or have completed a supervised drug or alcohol rehabilitation program, and they may use this information to continue or terminate assistance (42 U.S.C. § 13661(b)(2)).

In addition, federal law provides more general guidelines regarding discretionary termination of tenancy. In the public housing program, any criminal activity that threatens the health, safety, or right to peaceful enjoyment of the premises by other residents or any drug-related criminal activity in which a tenant, member of the tenant's household, guest, or other person under the tenant's control participates is cause for termination of tenancy (42 U.S.C. § 1437d(l)(6)). This is the case regardless of *where* the activity took place, meaning that a family can potentially be evicted for the conduct of a non-family member at a location other than the residence, regardless of whether or not

any members of the household were aware of the activity (see, viz., *HUD v. Rucker*, 2002). In the Section 8 Housing Choice Voucher program, criminal activity that threatens the health, safety, or right to peaceful enjoyment of the premises by other residents in the immediate area or *any* drug-related or violent criminal activity, on or near the premises, in which a tenant, member of the tenant's household, guest, or other person under the tenant's control participates is cause for termination of tenancy (42 U.S.C. § 1437f(o)(7)(D)). In the Section 8 project-based rental assistance program, criminal activity, that threatens the health, safety, or right to peaceful enjoyment of the premises by other residents in the immediate area or *any* drug-related criminal activity, on or near the premises, in which a tenant, member of the tenant's household, guest, or other person under the tenant's control participates is cause for termination of tenancy (42 U.S.C. § 1437f(d)(3)).

Fugitive status is another possible cause for termination of tenancy in the public housing (42 U.S.C. § 1437(d)(l)(9)), Section 8 Housing Choice Voucher (42 U.S.C. § 1437f(d)(1)(B)(v)), and Section 8 project-based rental assistance (42 U.S.C. § 1437f(d)(1)(B)(v)) programs. Individuals with fugitive status include those fleeing to avoid prosecution, custody, or confinement after a felony conviction and those violating a condition of probation or parole. The decision as to whether or not termination occurs is left to the discretion of the PHAs and property owners (24 C.F.R. § 5.859). Under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193), fugitive or fleeing felons are restricted from receiving housing assistance.

Empirical Studies

Apart from those mandated by federal guidelines, PHAs have the freedom to establish their own eligibility criteria (Samuels & Mukamal, 2004). This includes policies regarding criminal justice involvement, and most PHAs establish and enforce policies that are more restrictive than required by federal law (Lundgren et al., 2010). The available research indicates that the number of prohibited activities and the length of lookback periods for criminal justice involvement that may trigger denial or eviction often greatly exceed those described in federal guidelines (Curtis et al., 2013).

As part of their two-year study on the legal barriers encountered by individuals with criminal justice involvement in the U.S., Samuels and Mukamal (2004) analyzed self-reported policies of local PHAs in the largest city in each state. They found that a majority of PHAs (n = 47) conducted individualized assessments of applicants to determine eligibility for housing assistance. Yet, demonstrating the tendency of local PHAs to adopt criteria more restrictive than required by federal guidelines, the authors found that over one-half (n = 27) of surveyed PHAs made eligibility decisions based on arrests that never led to conviction. According to recent guidance from HUD, however, arrest is not sufficient evidence to prove that an individual engaged in criminal activity and, therefore, should not be used to trigger denial or termination of housing assistance (HUD, 2015a).

Lundgren and colleagues (2010) performed a review of federal, state, and local "postincarceration policies" (i.e., government-mandated collateral consequences) aimed at individuals with criminal convictions related to illegal drug use or sales that were in effect between 1980 and 2006. The authors examined scholarly articles, drug policy and

sentencing websites, and government websites, finding that it was not uncommon for states to implement lookback periods that exceeded the federal guideline of three years under the Housing Opportunity Program Extension (HOPE) Act of 1996 for people with past drug-related activity. Most states adhered to the federal recommendation of denying applicants previously evicted due to drug-related activity, those charged with a drug-related felony, and those suspected of drug-related activity for a period of three years.

Other states, however, rejected those with drug-related activity for a greater period of time. Alabama excluded individuals convicted of drug trafficking, and Missouri excluded those convicted of any drug-related offense for a period of 10 years (Lundgren et al., 2010). Arizona implemented a lookback period of five years for drug-related convictions with an exception for personal use, whereas six states adopted a lookback period of five years for any drug-related convictions. New York adopted a two-to-six-year lookback period, and North Carolina and South Carolina each excluded individuals for three to five years for convictions of drug-related offenses. At the same time, twelve states did not specify the length of lookback periods for convictions of drug-related offenses, which suggests that lifetime bans on access to housing assistance were possible.

Curtis and colleagues (2013) found a great deal of variation in how PHAs across the U.S. considered prospective and current residents' alcohol, drug, and criminal histories. The authors conducted a systematic review of administrative documents from 40 PHAs from 40 states. Most PHAs (n = 37) prohibited in some way those who engaged in "illegal drug use, abuse, possession, distribution, and trafficking" (p. 43). Over one-half (n = 22) did not explicitly state if individuals may apply or be reinstated after a period of time following these activities, while 12 allowed staff to individually evaluate

applicants and current residents to determine if such drug-related activities necessitated a ban. The authors noted that some PHAs reported multiple lookback periods for a single offense, as well as different periods for similar offenses.

A majority (n = 34) of PHAs described rejecting applicants with a prior eviction (in either private or public housing) due to drug-related activities in some way (Curtis et al., 2013). Thirty prohibited those with drug-related evictions from obtaining housing assistance for between three and five years, and one-half of these PHAs (n = 15) allowed their staff to individually evaluate applicants to determine the length of the ban. Four PHAs implemented lookback periods of six to ten years, three of which allowed their staff to individually evaluate applicants to determine the length of the ban. Two established lifetime bans, with one allowing staff to use discretion in determining whether or not this lifetime prohibition was necessary.

Six PHAs specifically mentioned prohibiting individuals with drug-related convictions: three did not describe a specific lookback period; two described a three-to-five-year period; and one a six-to-ten-year period (Curtis et al., 2013). Six PHAs reported denying applicants and terminating tenants based on a drug-related arrest alone. Five did not mention a lookback period, and one described a one-to-two-year prohibition. Two PHAs described pending drug-related charges as rationale for prohibiting individuals from receiving housing assistance and did not define a lookback period.

Curtis and colleagues (2013) also found prohibitions against violent criminal behavior. Most PHAs (n = 34) had restrictions regarding unspecified violent behavior. Lookback periods ranged from one to two years (n = 3), three to five years (n = 18), and six to ten years (n = 5), with one lifetime ban. Nine of these PHAs allowed their staff to

consider individual circumstances to determine if these bans were necessary. Sixteen of those with restrictions regarding unspecified violent behavior did not mention a ban length, two of which reported allowing their staff to individually evaluate applicants to determine if a ban was necessary.

Beyond violent activities in general, Curtis and colleagues (2013) reported 16 specific categories of violent criminal behavior defined by PHAs as potential grounds for exclusion. Lookback periods for these categories were usually unspecified or clustered in the three-to-five-year range, which led the researchers to assert that such bans "are meant to supplement the existing criminal legal framework by adding enforcement power to less well-defined behaviors" (p. 45). The most common was property violence or vandalism (n = 28), followed by sexual crimes (n = 19), homicide, murder, and manslaughter (n = 17), and assault (n = 17). For those with violent convictions, two PHAs mentioned lookback periods between three and five years. One PHA specifically banned individuals with arrests for violent criminal behavior for six to ten years.

Prohibitions against alcohol abuse and nonviolent criminal behavior were also common (Curtis et al., 2013). Almost all PHAs (n = 37) prohibited in some way those who engaged in alcohol use or abuse, with bans ranging from six months to lifetime. The authors noted that restrictions related to alcohol abuse were likely reacting to federal guidelines (42 U.S.C. § 13662), which instruct PHAs to establish standards that prohibit admission and tenancy if they have reasonable cause to believe that a household member's abuse or pattern of alcohol abuse may threaten the health, safety, or right to peaceful enjoyment of the premises by other residents. A majority of PHAs (n = 31) also described rejecting applicants with a prior eviction in either public or private housing as a

result of alcohol abuse or nonviolent criminal activities. PHAs adopted lookback periods of one to two years (n = 5), three to five years (n = 13), and six to ten years (n = 2), with three instituting lifetime bans without the possibility of consideration of individual circumstances.

Finally, Curtis and colleagues (2013) reported that PHAs also defined specific categories of nonviolent criminal behavior that may result in exclusion from housing assistance programs. For instance, PHAs reported excluding individuals who engaged in theft, burglary, or shoplifting (n = 14), arson (n = 13), prostitution or solicitation (n = 7), and driving-related violations (n = 3). Thirteen PHAs reported excluding individuals with a nonviolent conviction, and four specifically excluded those with an arrest for a nonviolent offense. None of these PHAs identified lookback periods for arrests or convictions related to nonviolent offenses. Two PHAs described excluding those who had been incarcerated for any type of crime, for periods ranging from six months to two years. PHAs also commonly reported excluding individuals for "unspecified activities or incidents," including behavior that may not be "criminally enforceable" (n = 27), suggesting that PHAs tend to utilize considerable discretion when considering eligibility for assistance (p. 44).

Most recently, Purtle and colleagues (2020) conducted a content analysis of administrative documents for 152 cities with populations of at least 100,000, in order to explore the variation in restrictiveness among policies aimed at potential and current residents with criminal justice involvement. On average, PHAs in the sample described a total of five events that could potentially trigger denial from or termination of housing

assistance (range = 0 – 9). The authors reported 16 thematic categories in the administrative documents of these PHAs.

One area of attention was length of lookback periods for excluding individuals with certain types of criminal justice involvement from receiving housing assistance. A majority of PHAs adopted lookback periods for criminal justice involvement that were longer and therefore more restrictive than required by federal law (Purtle et al., 2020). With respect to drug-related criminal activity, nearly one-half (46.7%) implemented a three-year lookback period or did not specify a lookback period[7]. And yet, over one-half adopted longer lookback periods (i.e., 43.4% implemented a period of four to five years, and 9.9% adopted lookback periods of six or more years). The authors found similar lookback periods regarding violent criminal activity, with nearly one-half (46.1%) reporting that they excluded individuals for three years or did not specify a lookback period. More than one-third (41.1%) reported lookback periods of four to five years, and 11.8 percent adopted periods of six or more years. In terms of past drug-related evictions from assisted housing and its impact on future housing assistance, the majority (65.8%) adopted a three-year lookback period or did not specify a length of time, while the remaining PHAs reported four to five years (25.7%) or six years or more (8.6%). Most PHAs (82.2%) used the date of conviction or did not specify the date to be used as the starting point from which time needed to elapse after the criminal justice involvement to be eligible for housing assistance. A minority of PHAs reported using the date of crime, arrest, or charge (11.2%) or release from prison or end of supervision (6.6%).

[7] It is important to note that, although the researchers grouped unspecified lookback periods with the least restrictive (i.e., three years), not specifying a lookback period could mean that, given their discretion, PHAs could enforce much longer bans than even the most punitive that were reported.

Another area of attention was mitigating circumstances surrounding criminal justice involvement and their influence on admission eligibility decisions. Most PHAs (86.2%) considered the mitigating circumstances of an individual's criminal justice involvement in their decisions regarding admission, while the remaining PHAs (13.8%) did not (Purtle et al., 2020). Circumstances related to the nature, or seriousness, of the criminal justice involvement were explicitly considered as mitigating by about one-half of PHAs (50.7%), while fewer (40.8%) took into account the impact on an applicant's family as a mitigating circumstance. Over one-half of PHAs (51.3%) reported that arrests or criminal charges were given less weight than convictions, while the remaining 48.7 percent did not, both of which are in direct conflict with a federal policy memo that explicitly prohibits using arrest records as evidence in denying an applicant (HUD, 2015a).

A third area of attention was mitigating circumstances surrounding whether or not to evict current residents based on criminal justice involvement. One-half of the PHAs explicitly allowed families to remove one of their relatives from their lease to avoid eviction for any criminal or drug activity, while the remaining one-half did not (Purtle et al., 2020). A majority (52.6%) reported considering mitigating circumstances in deciding whether or not to terminate assistance to current residents, while the remaining PHAs (47.4%) did not. Most PHAs did not allow circumstances related to the nature of the criminal justice involvement (61.8%), impact on family (65.1%), or proof of good tenancy (73%) to be considered as mitigating factors in eviction decisions. Nearly one-third of PHAs (32.9%) reported that testimony from rehabilitation centers could be used as evidence against tenants. Interestingly, 36.8 percent explicitly described arrest as grounds

for eviction, which is in direct conflict with a federal policy memo that prohibits arrest as evidence for eviction (HUD, 2015a).

Critical Race Theory

The present study examines the experiences of individuals in a HF program through the lens of critical race theory. Critical race theory is interested in "studying and transforming the relationship among race, racism, and power" (Delgado & Stefancic, 2017, p. 3) and emphasizes that the amelioration of injustice should be the principal objective of the legal system (Brooks, 1994). Critical race theory emerged in response to critical legal studies and feminist theory (Delgado & Stefancic, 2017; Martinez, 2014) and holds that (1) race is a social construct, (2) racism is vital to the creation and maintenance of racial hierarchies and, in turn, white hegemony, and (3) racism is a pervasive and permanent feature of social structures and institutions (Delgado & Stefancic, 2017). Although racism has come to refer to conscious and explicit acts of racial animus (Quintanilla, 2013; Steil & Delgado, 2019), critical race theorists make a distinction between discrimination (i.e., differential treatment based on race) and subordination (i.e., placement in a position of lesser importance or power). Subordination is the process through which the interests of the powerful are privileged through "individual, institutional, or societal processes that discount outsider interests or values" (Brooks, 2009, p. 93).

The criminal justice system is an important mechanism of racial subordination, through which supposedly race-neutral laws and policies marginalize people of color while masking inequality (Capers, 2014). Racial disparities can be seen in rates of traffic stops (Rojek, Rosenfeld, & Decker, 2012; Tillyer, Klahm, & Engel, 2012), arrest

(Beckett, Nyrop, & Pfingst, 2006), pretrial detention (Spohn, 2009; Wooldredge, Frank, Goulette, & Travis, 2015), incarceration (Baumer, 2013; Tonry & Melewski, 2008; Ulmer, 2012), lifetime sentences (Garrett, Seale-Carlisle, Modjadidi, & Renberg, 2021; Nellis, 2017), and death sentences (Baldus, Woodworth, & Pulaski, 1990; Paternoster & Brame, 2008). The impact of these disparities cannot be overstated; in addition to the numerous collateral consequences of criminal justice involvement (Bennett, 2017; Mauer & Chesney-Lind, 2002; Subramanian et al., 2014), racial bias in the justice system contributes to "cumulative disadvantages," whereby prior justice system contact (i.e., criminal background; Kurlychek & Johsnon, 2019, p. 291) impacts subsequent contact and outcomes in the criminal justice system (Hinton et al., 2018; Spohn, 2009). Austin (2008) asks to what extent society can hold an individual accountable for their mistakes:

> ...while at the same time admitting the existence of systemic wrongs that impact the opportunity structure of the minority group of which that person is a member...[and] justifying stripping otherwise unconditionally released ex-offenders of important social and economic entitlements and opportunities, which increases their chances of recidivism. Race is an essential component of the stigmatization. (p. 210)

The Present Study

The purpose of the present study is to compare the experiences and outcomes of individuals with and without criminal justice system contact who are formerly homeless and recipients of federally subsidized rental assistance within the context of LHFP. As discussed earlier in this chapter, many people with criminal justice involvement are excluded from federally subsidized housing assistance programs due to federal laws and local administrative decisions. However, by examining an urban housing assistance program that uses a HF model, which allows people with criminal justice involvement to participate, it may be possible to shed light not only on how such individuals fare in a

specific federally supported rental assistance program but also on whether or not prohibitions against them make sense for housing assistance programs in general.

Ultimately, the results of these analyses should demonstrate whether LHFP participants with criminal justice involvement had different experiences and outcomes than those without criminal justice involvement. If significant differences between the two groups are not observed, this would indicate that categorically excluding individuals with criminal justice involvement from housing assistance programs may not be justified. Alternatively, if LHFP participants with criminal justice involvement exhibit differences from those without criminal justice involvement, particularly in regard to mental health conditions and risky behavior, this may shed light on the rationale for their exclusion.

CHAPTER III

METHODOLOGY

This chapter presents an overview of the methodological foundation of the present study. The primary research questions are highlighted, followed by an explanation of the data and data collection procedures. Measures used in the present study are subsequently outlined and their relevance to the present study is discussed. Next, the data analysis plan is presented. Finally, the chapter concludes with details regarding the sample and descriptive statistics of the study variables.

Research Questions

The purpose of the present study is to compare the experiences of individuals with and without criminal justice involvement who are formerly homeless and recipients of federally subsidized housing assistance within the context of LHFP. Specifically, this research will address three primary research questions:

1. *Do LHFP participants with criminal justice involvement differ from those without criminal justice involvement at program onset?*
2. *Do LHFP participants with past criminal justice involvement differ from those without past criminal justice involvement at specific intervals of program exposure?*
3. *Does past criminal justice involvement among LHFP participants influence housing outcomes at 24 months?*

Data and Data Collection

The researcher utilized secondary data from FHC-Phoenix across three grants to answer the research questions. In 2008, FHC-Phoenix was awarded a five-year, $2 million Services in Supportive Housing (SSH) grant, which the SAMHSA Center for Substance Abuse Treatment (CSAT) announced were to be used to "increase the number of homeless persons placed in stable housing and who receive treatment services for alcohol, substance use, and co-occurring disorders" (SAMHSA, 2008, para. 1). FHC-Phoenix used this funding, along with Section 8 Housing Choice and S+C vouchers awarded by HUD, to enlist 145 LHFP participants between October 2008 and September 2013. In 2010, FHC-Phoenix was awarded a three-year, $1.5 million Cooperative Agreements to Benefit Homeless Individuals (CABHI) grant, jointly funded by SAMHSA's CSAT and Center for Mental Health Services (CMHS). The main goal of the CABHI grant program is to provide individuals experiencing homelessness with "a supportive, permanent place to live that promotes wellness and sustained recovery from addiction and mental disorders" (SAMHSA, 2011, para. 10). Between October 2011 and September 2014, the CABHI grant and HUD vouchers were used to fund the enrollment of 126 LHFP participants. In 2014, FHC-Phoenix was awarded a three-year, $1.2 million SSH grant, which, along with HUD vouchers, were used to enlist 106 LHFP participants between October 2014 and September 2017. Because "all SAMHSA grantees are required to collect and report performance data using approved measurement tools" (SAMHSA, 2017, p. 4) in accordance with the Government Performance and Results Act (GPRA), CSAT provides a survey tool (i.e., the CSAT-GPRA tool) for grantees to administer "at baseline, discharge, and 6-month follow-up interviews" (SAMHSA, 2017, p. 4). FHC-

Phoenix also conducts the CSAT-GPRA survey interviews with LHFP participants at 12, 18, and 24 months. Data for the present study originated from these LHFP participant interviews.

CSAT-GPRA survey responses were obtained from the administrative electronic databases and physical files of FHC-Phoenix while under supervision of Dr. Carey D. Addison, Jr., Health Care for the Homeless Supervisor, at FHC-Phoenix. The researcher collected these interview data for individuals who were enrolled as LHFP participants at some point between October 1, 2008 and September 30, 2017, which followed these individuals across the three SAMHSA grants received by FHC-Phoenix for the purpose of administering LHFP. Specifically, the researcher gathered data on demographics, criminal justice involvement, mental health conditions, risky behavior, and housing outcomes of LHFP participants from intake, six-month, 12-month, 18-month, and 24-month interviews. These data contained self-reported interview responses, which were not verified independently by the researcher. A given participant's data from one interview was linked to the same participant's data from other interviews through the use of an identification number assigned to participants by FHC-Phoenix. Prior to data collection, all procedures were reviewed and subsequently approved by FHC-Phoenix and the researcher's university institutional review board to ensure that ethical standards were met.

Measures

Variables of interest in the present study include demographics, criminal justice involvement, mental health conditions, risky behavior, and housing outcomes. The rationale for the inclusion and operationalization of these variables is discussed below.

Table 2 provides a description of the comparison variables, and Table 3 presents the housing outcome variables.

Demographic Variables

Eight demographic measures were included as descriptive variables. *Gender* was measured categorically (female = 0, male = 1) and indicates the gender identified by the participant at intake. *Race* was measured categorically (nonwhite = 0, white = 1) and indicates a participant's self-reported race at intake. *Age* was measured continuously in years and indicates a participant's age at intake. *Education* was measured continuously in years and indicates a participant's reported level of education at intake. *Number of children* was measured continuously and indicates the number of children reported by a participant at intake. *Employment status* was measured categorically (unemployed = 0, employed = 1) and indicates whether or not a participant was employed on a part- or full-time basis at intake. *Income in the past 30 days* was measured continuously in dollars and indicates the income received in the 30 days prior to intake. *Social support* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported interaction with supportive family and/or friends in the 30 days prior to intake.

Demographic variables were included in the present study to compare the personal characteristics of participants, in order to examine the ways in which participant experiences in the program differ based on these factors. Women are more likely to experience homelessness as a result of intimate partner violence (Bomsta & Sullivan, 2018; Pavao, Alvarez, Baumrind, Induni, & Kimerling, 2007), while men are more likely to experience chronic homelessness, often accompanied by substance use and mental health disorders (Caton et al., 2005; Lee et al., 2010). As a result, housing assistance and

Table 2.

Operationalization, comparison variables

Type	Variable	Description
Demographic		
	Gender	Dummy variable indicating participant's gender at intake (female = 0, male = 1)
	Race	Dummy variable indicating participant's race at intake (nonwhite = 0, white = 1)
	Age	Participant age at intake
	Education	Years of education at intake
	Number of children	Number of children at intake
	Employment status	Dummy variable indicating part- or full-time employment at intake (no = 0, yes = 1)
	Income, past 30 days	Income from all sources in past 30 days
	Social support	Dummy variable indicating interaction with supportive family/friends in past 30 days (no = 0, yes = 1)
CJI		
	Arrest days	Number of times arrested in past 30 days
	Arrest	Dummy variable indicating arrest in past 30 days (no = 0, yes = 1)
	Incarceration days	Number of nights spent in jail/prison in past 30 days
	Incarceration	Dummy variable indicating incarceration in past 30 days (no = 0, yes = 1)
	Supervision status	Dummy variable indicating probation or parole supervision (no = 0, yes = 1)
	Awaiting trial or sentencing	Dummy variable indicating awaiting charges, trial, or sentencing (no = 0, yes = 1)
	CJI scale	Scale summing binary measures of arrest, incarceration, supervision, and awaiting trial or sentencing at intake (no CJI = 0, highest CJI = 4)
	Initial CJI	Dummy variable indicating arrest, incarceration, supervision status, or awaiting trial or sentencing at intake (no = 0, yes = 1)
Mental health		
	Depression days	Days of serious depression in past 30 days[a]
	Depression	Dummy variable indicating serious depression in past 30 days (no = 0, yes = 1)
	Anxiety days	Days of serious anxiety in the past 30 days[a]
	Anxiety	Dummy variable indicating serious anxiety in past 30 days (no = 0, yes = 1)
	Hallucination days	Days of hallucinations in past 30 days[a]
	Hallucination	Dummy variable indicating hallucinations in the past 30 days (no = 0, yes = 1)
	Impaired brain function days	Days of trouble understanding, concentrating, or remembering in past 30 days[a]
	Impaired brain function	Dummy variable indicating trouble understanding, concentrating or remembering in past 30 days (no = 0, yes = 1)

Table 2 (continued).

Operationalization, comparison variables

Type	Variable	Description
Mental health	Any mental health days	Average number of days of depression, anxiety, hallucinations, impaired brain function in past 30 days
	Any mental health	Dummy variable indicating depression, anxiety, hallucinations, or impaired brain function in past 30 days (no = 0, yes = 1)
Risky behavior		
	Violent behavior days	Days of trouble controlling violent behavior in past 30 days[a]
	Violent behavior	Dummy variable indicating trouble controlling violent behavior in past 30 days (no = 0, yes = 1)
	Alcohol use days	Days of alcohol use in past 30 days
	Alcohol use	Dummy variable indicating alcohol use in past 30 days (no = 0, yes = 1)
	Illegal drug use days	Days of illegal drug use in past 30 days
	Illegal drug use	Dummy variable indicating illegal drug use in past 30 days (no = 0, yes = 1)
	Criminal behavior instances	Instances of criminal behavior reported in past 30 days[a]
	Criminal behavior	Dummy variable indicating criminal behavior in past 30 days (no = 0, yes = 1)
	Risky behavior scale	Scale summing binary measures of violent behavior, alcohol use, illegal drug use, and criminal behavior in past 30 days (no = 0, highest = 4)
	Any risky behavior	Dummy variable indicating violent behavior, alcohol use, illegal drug use, or criminal behavior in past 30 days (no = 0, yes = 1)

[a] Not due to substance use

other supportive services do not always meet the needs of homeless men and women equally (Winetrobe et al., 2017).

Likewise, it is important to examine the impact of race on the experiences of participants. Although accounting for less than one-third of the general population, about 78 percent of those experiencing homelessness (Buchino et al., 2019; Olivet et al., 2018) and approximately 70 percent of those incarcerated (Bronson & Carson, 2019; Carson, 2020) in the U.S. are people of color. Numerous scholars have criticized the use of race as an independent variable in social science research (Alcoff, 2003; Denton & Dean, 2010; Henne & Shah, 2015; LaVeist, 1994; Viano & Baker, 2020); race is included as a variable of interest in the present study not because it is a meaningful personal attribute (see Bridges, 2013), but to interrogate the role that race plays in shaping an individual's lived experiences (Brooks & Widner, 2010; Goetz, Damiano, & Williams, 2019; Rich, 2010; Seiler, 2003). The present study designated nonwhite as the reference category[8] in order to critically examine the ways in which whiteness confers systematic cultural, social, and economic advantages upon those perceived to be white (Carbado & Gulati, 2013; Guess, 2006; Roth, 2010; Vargas & Kingsbury, 2016).

In addition to gender and race, several other demographic factors have been linked to homelessness and outcomes in supportive housing programs. Age has been shown to both positively (Hanauer et al., 2020; Malone, 2009) and negatively (Lettner, Doan, & Miettinen, 2016) impact housing outcomes, and individuals with higher levels of education were found to have higher rates of success in supportive housing programs

[8] The researcher acknowledges that this is a simplified classification of race that belies its complex nature. There is great variation within these categories, as well as the degree to which individuals are perceived by others as white or non-white. See Nanda (2012) and Rich (2010) for a more detailed discussion.

(Pearson, Montgomery, & Locke, 2009). Early (2005) found that individuals with children were more likely to experience homelessness but less likely to be unsheltered. Unemployment and lack of income have been identified as primary determinants of homelessness (Barile, Pruitt, & Parker, 2018; Doak, 2010; Glendening & Shinn, 2017); likewise, experiencing homelessness severely limits an individual's employment and economic prospects (National Coalition for the Homeless, 2009; Poremski et al., 2015). Lastly, social support is an important determinant of mental and physical health for those with a history of homelessness (Durbin et al., 2018; Johnstone, Jetten, Dingle, Parsell, & Walter, 2015; Toro, Tulloch, & Ouellette, 2008), especially among those with criminal justice involvement (Herbert et al., 2015), and serves to connect these individuals to critical resources and opportunities that potentially improve well-being (Anucha, 2005; Fitzpatrick, Irwin, Lagory, & Ritchey, 2007).

Criminal Justice Involvement Variables

The CSAT-GPRA data included continuous measures of arrest (*arrest days*) and incarceration (*incarceration days*), which indicate the number of days a participant reported arrest or incarceration in the 30 days prior to intake. Categorical measures of *awaiting trial or sentencing*, which indicates whether or not a participant was awaiting charges, trial, or sentencing at intake (no = 0, yes = 1), and *supervision status*, which indicates whether or not a participant was subject to probation or parole supervision at intake (no = 0, yes = 1), were also utilized. Dummy variables were created from each continuous variable to indicate whether or not a participant reported *arrest* or *incarceration* in the 30 days prior to intake (no = 0, yes = 1). In addition, a *CJI scale* was created, summing the binary measures of *arrest*, *incarceration*, *awaiting trial or*

sentencing, and *supervision status*. Possible scores ranged from zero, which indicates no criminal justice involvement, to four, which indicates the highest level of criminal justice involvement (i.e., arrest, incarceration, awaiting trial or sentencing, and probation/parole supervision) at intake. Finally, a dummy variable, *initial CJI*, was created, which indicates whether or not a participant reported any of the four measures of criminal justice involvement at intake (no = 0, yes = 1).

The reciprocal relationship between criminal justice involvement and homelessness is well-established (Cusack & Montgomery, 2017; Dyb, 2009; Fitzpatrick & Myrstol, 2011; Gonzalez et al., 2018; Gowan, 2002; Levitt, Culhane, DeGenova, O'Quinn, & Bainbridge, 2009; Malone, 2009; McNiel, Binder, & Robinson, 2005; Sirotich & Rakhra, 2021; Somers, Rezansoff, Moniruzzaman, Palepu, & Patterson, 2013). Individuals experiencing homelessness "are overrepresented among those arrested and booked into local jails" (Fitzpatrick & Myrstol, 2011, p. 271; see also Eberle, Kraus, Serge, & Hulchanski, 2001; Tsai & Rosenheck, 2012) and are more likely to be charged with less serious "nuisance" crimes as opposed to violent or felony crimes (Beckett & Herbert, 2011; Coalition on Homelessness [CoH], 2015; Fischer, Shinn, Shrout, & Tsemberis, 2008; Rankin, 2019; Roy et al., 2016). Conversely, individuals with criminal justice involvement are more likely to face obstacles in obtaining housing (Crowell, 2017; Leasure & Martin, 2017; Lundgren et al., 2010; Metraux & Culhane, 2006) and, as a result, are more likely to experience chronic homelessness (Herbert, Morenoff, Harding, & Purvis, 2016; Levitt et al., 2009; Tsai & Rosenheck, 2012).

Mental Health Variables

Because all LHFP participants are disabled by a mental health and/or substance abuse disorder, the extent to which mental health conditions influence their experiences is of interest to the present study. Four continuous measures of mental health were included in the CSAT-GPRA data. *Depression days* was measured continuously and indicates the number of days of serious depression reported by a participant in the past 30 days. *Anxiety days* was measured continuously and indicates the number of days a participant reported experiencing serious anxiety in the past 30 days. *Hallucination days* was measured continuously and indicates the number of days of hallucinations reported by a participant in the past 30 days. *Impaired brain function days* was measured continuously and indicates the number of days a participant reported experiencing trouble understanding, concentrating, or remembering in the past 30 days. Next, four dummy variables, *depression*, *anxiety*, *hallucination*, and *impaired brain function*, were created, which indicate whether or not a participant reported experiencing each individual mental health condition in the past 30 days (no = 0, yes = 1). In addition to the individual measures of mental health included in the CSAT-GPRA data, a summary measure, *any mental health days*, was created and indicates the mean number of days a participant reported experiencing any of the four mental health conditions in the past 30 days. A dummy variable, *any mental health*, was then created and indicates whether or not a participant reported experiencing any of the four individual mental health conditions in the past 30 days (no = 0, yes = 1).

Risky Behavior Variables

Four continuous measures of risky behavior were included in the CSAT-GPRA data. *Violent behavior days* was measured continuously and indicates the number of days a participant reported experiencing trouble controlling violent behavior in the past 30 days. *Alcohol use days* was measured continuously and indicates the number of days of alcohol use reported by a participant in the past 30 days. *Illegal drug use days* was measured continuously and indicates the number of days a participant reported using illegal drugs in the past 30 days. *Criminal behavior instances* was measured continuously and indicates the number of times a participant reportedly engaged in criminal behavior in the past 30 days. Next, four dummy variables, *violent behavior*, *alcohol use*, *illegal drug use*, and *criminal behavior*, were created, which indicate whether or not a participant reported engaging in each individual risky behavior in the past 30 days (no = 0, yes = 1). In addition to the individual measures of risky behavior, a *risky behavior scale* was created, summing the four binary individual measures of risky behavior. Possible scores ranged from zero, which indicates no risky behavior, to four, which indicates the highest level of engagement in risky behavior (i.e., trouble controlling violent behavior, alcohol use, illegal drug use, and criminal behavior) in the past 30 days. A dummy variable, *any risky behavior*, was then created and indicates whether or not a participant reported engaging in any of the four measures of risky behavior in the past 30 days (no = 0, yes = 1).

Because all LHFP participants have a history of a substance abuse and/or mental health disorder, measures of alcohol and illegal drug use are included in the analyses in order to examine the extent to which these factors influence their experiences. In

addition, homelessness is often associated (in popular culture) with risky behavior (National Law Center on Homelessness and Poverty [NLCHP], 2019; Rankin, 2019), and those experiencing homelessness are often characterized as criminal and/or dangerous individuals (Fitzpatrick & Myrstol, 2011; McVicar, Moschion, & van Ours, 2015). Given the risks individuals must take in order to survive when they are not stably housed (NLCHP, 2019; Rankin, 2019), this is, perhaps, not surprising. In many places in the U.S., for example, activities which are legal for the general public, such as sitting or lying down outdoors, resting in a parked car, covering oneself with a blanket in public, or asking for or receiving food, are punishable offenses when undertaken by the homeless (ACLU of Colorado & NLCHP, 2018; Herring, Yarbrough, & Alatorre, 2020; NLCHP, 2019; Rankin, 2019; Robinson, 2019). In this way, the criminalization of homelessness serves to reinforce the negative stereotype of the homeless as dangerous delinquents (Agans & Liu, 2015; Darrah-Okike, Soakai, Nakaoka, Dunson-Strane, & Umemoto, 2018; Fitzpatrick & Myrstol, 2011; Tars, Johnson, Bauman, & Foscarinis, 2014), which further justifies their persecution (Berk & MacDonald, 2010; King & Dunn, 2004; McNamara, Crawford, & Burns, 2013).

Housing Outcome Variables

The housing outcome measures were derived from CSAT-GPRA discharge information. *Housing status* was measured categorically and indicates a participant's current housing status. From *housing status*, two dummy variables, *housing stability* and *program success*, were created. *Housing stability* indicates whether or not a participant remained housed through LHFP (no = 0, yes = 1). Housing instability is related to poor mental and physical health outcomes (Harris et al., 2019; Kirby & Kaneda, 2006; Suglia,

Table 3.

Operationalization, housing outcome variables

Variable	Description	Type	Categories	Description
Housing status	Current housing status			
		Housed	Interview	Housed in LHFP with interview
			No interview	Housed in LHFP without interview
		Forced move	Rule violation	Terminated due to violation of rules
			Incarceration	Terminated due to incarceration
			Nonparticipation	Terminated due to nonparticipation
			Other, unknown	Terminated due to other, unknown reasons
		Other move	Death	Died while housed in program
			Transfer, health	Transferred to another facility for health reasons
			Referral	Referred to another program or service
			Left	Left against staff advice
			Disappeared	Lost contact or disappeared
			Completion	"Graduated" to unassisted housing
Housing stability	Dummy variable indicating remaining housed in LHFP (no = 0, yes = 1)			
Program success	Dummy variable indicating positive program outcome (terminated = 0, completion, housed or death in LHFP = 1)			

Duarte, & Sandel, 2011), while stable housing has been shown to improve mental and physical health (Jaworsky et al., 2016) and reduce contact with the criminal justice system (O'Campo et al., 2016). Moreover, because reducing periods of homelessness by increasing housing stability is a primary goal of the HF approach (Pearson et al., 2009), it is important to understand what factors may influence premature exits from LHFP.

Program success indicates whether a participant was terminated from LHFP (= 0) or "graduated" from, remained housed through, or died while housed through LHFP (= 1). Housing stability is an important outcome to consider, but a more nuanced examination of outcome data is also warranted (Homelessness Policy Research Institute, 2018). Several participants left LHFP to live independently in unassisted housing (i.e.,

graduated), which is considered a successful program outcome. Likewise, participants who remained housed through LHFP or who died during the program can also be seen as having achieved a successful program outcome, as these individuals did not return to homelessness.

Data Analysis

Data were analyzed using IBM Statistical Package for the Social Sciences (SPSS) 27. Findings were considered statistically significant at the $p < .05$ level. First, univariate descriptive statistics, including measures of frequency (i.e., count, percentage), central tendency (i.e., mean, median, mode), and dispersion (i.e., range, standard deviation), were examined. Next, bivariate analyses (i.e., chi-square, *t*-test) were performed in order to answer the first and second research questions. Use of the Pearson chi-square test of independence is dependent upon the satisfaction of several assumptions regarding the nature of the data being analyzed (i.e., categorical data, independence of observations, cross-sectional design, expected counts ≥ 5). In cases where the expected cell count was less than five, the Fisher's exact test (which does not require five or more expected counts per cell) was used in place of the chi-square test of independence.

The Welch independent samples *t*-test (referred to as the Welch *t*-test) was used to analyze continuous dependent variables. The Welch *t*-test differs from the more commonly used Student's *t*-test in that it does not rely on the assumption of homogeneity of variances and is generally considered more robust when sample sizes are unequal (Delacre, Lakens, & Leys, 2017; Fagerland & Sandvik, 2009; Gans, 1981; Hayes & Cai, 2007). Furthermore, although the Welch *t*-test assumes normality in the dependent variable, it has been found to be remarkably robust even under extreme violations of

normality (Boneau, 1962; Fagerland, 2012; Rasch, Teuscher, & Guiard, 2007; Zimmerman & Zumbo, 1992; cf. Bradley, 1980). This robustness, coupled with the fact that the *conditional* use of the Welch *t*-test can result in a higher Type I error rate (Delacre et al., 2017; Hayes & Cai, 2007), has led many to conclude that preliminary tests (e.g., Levene's test of equality of variances) should not be performed[9] and that unequal variances should be assumed (Gans, 1981; Rasch, Kubinger, & Moder, 2011; Zimmerman, 2004). For these reasons, the Welch *t*-test was chosen, and tests of variance equality were not performed. Per Ruxton (2006), degrees of freedom were rounded to the nearest integer.

Although the Welch *t*-test performs well under certain assumption violations, it is sensitive to possible outliers (i.e., extreme values) in the data (Bakker & Wicherts, 2014; Fagerland & Sandvik, 2009; Rasmussen, 1985; Zimmerman & Zumbo, 1992). Some statistical textbooks recommend removing outliers prior to conducting a *t*-test, but many researchers have condemned this practice (e.g., Wilcox & Keselman, 2003; Zimmerman & Zumbo, 1990). While extreme values can adversely affect the accuracy, power, and error rates of parametric statistical tests (Osborne & Overbay, 2004), including the Welch *t*-test, unless they are found to be caused by error, their removal can also result in loss of accuracy and power and increase the Type I error rate (Bakker & Wicherts, 2014; Wilcox & Keselman, 2003; Zimmerman & Zumbo, 1990).

One way to mitigate the adverse effects of outliers is to use nonparametric statistical methods, which rely upon different, but nonetheless important, assumptions

[9] Zimmerman (2004) nicely presented the argument against preliminary tests of variance equality, as well as the rationale for preferring the Welch *t*-test over Student's, concluding that preliminary tests "substantially modify the significance level" of the subsequent test (p. 180).

(Fligner & Policello, 1981). However, "parametric tests have been shown to be more powerful than their nonparametric counterparts" (Rasmussen, 1985, p. 505; see also Skovlund & Fenstad, 2001; Zimmerman, 1998), and thus, a unified approach, which utilizes parametric methods to analyze data that has been transformed into ranks, allows the researcher to retain the power of the parametric test while reducing the influence of outliers (Conover & Iman, 1981; Zimmerman & Zumbo, 1992). Zimmerman and Zumbo (1992) recommended pairing the Welch *t*-test with rank transformation in order to increase the power of the independent samples *t*-test when sample sizes are unequal and outliers are detected, noting that this increased power outweighs any "loss of information" resulting from the rank transformation (p. 841). Thus, to moderate the influence of outliers without removing legitimate (if deviant) values, a rank transformation was applied prior to conducting the Welch *t*-test in cases where outliers were detected (by visual inspection of boxplots).

Finally, for the multivariate analyses, binary logistic regression was used to model the determinants of housing outcomes among LHFP participants in order to answer the third research question. Binary logistic regression is used to predict the relationship between a binary outcome (i.e., dependent variable) and one or more categorical or continuous predictors (i.e., independent variables). Use of binary logistic regression is reliant upon the satisfaction of several assumptions regarding the nature of the data being analyzed (i.e., binary dependent variable, independence of observations, linearity in the logit). Multicollinearity was assessed by inspection of variance inflation factors (VIF; Field, 2018). Potential outliers were identified by examination of standardized residuals.

Following the steps outlined by Hosmer, Lemeshow, and Sturdivant (2013), purposeful selection was used to determine which predictor variables to include in each model.

Sample

The study population of interest is formerly homeless individuals with a substance abuse and/or mental health disorder who are recipients of federally subsidized housing assistance. FHC-Phoenix enrolled 145 such participants in LHFP during the SAMHSA-I grant (2008-2013), 126 during SAMHSA-II (2011-2014), and 106 during SAMHSA-III (2014-2017). As descriptive statistics for the three cohorts revealed that participant characteristics and outcomes were similar, participant data were pooled to improve generalizability. Because four participants entered the program more than once, four were never placed in housing, and one did not complete an interview at intake, these individuals (n = 9) were removed from the present study, resulting in a pooled sample consisting of 368 LHFP participants.

Demographics at Intake

Demographic measures included participants' *gender, race, age, education, number of children, employment status, income in the past 30 days,* and *social support* (see Table 4). A majority of LHFP participants (n = 328; 89.1%) were male, while 38 (10.3%) were female. Two participants (0.5%) declined to identify their gender during the intake interview. A majority of participants (n = 185; 50.3%) identified as multiracial or indicated some race other than white, and 48.4% (n = 178) identified their race as white. Race was missing for five (1.4%) participants. The average age of LHFP participants was 49 (M = 48.5); the youngest participant was 21 years old and the oldest 75 years old. Three participants' (0.8%) ages were missing. On average, participants reported 12 years

Table 4.

LHFP participant demographics at intake

Variable	Response	% (*N*)	Mean (range)
Gender	Male	89.1% (*n* = 328)	
	Female	10.3% (*n* = 38)	
Race	Non-white	50.3% (*n* = 185)	
	White	48.4% (*n* = 178)	
Age			48.5 (21 – 75)
Education			11.7 (0 – 16)
Children			1.6 (0 – 10)
Employment status	Unemployed	91.3% (*n* = 336)	
	Employed	8.2% (*n* = 30)	
Income			510.6 (0 – 3374)
Social support	No	50.5% (*n* = 186)	
	Yes	48.9% (*n* = 180)	

of education (*M* = 11.7), with one participant (0.3%) reporting none and 12 (3.3%) reporting 16 years of education. Two participants (0.5%) declined to answer. LHFP participants reported an average of two children (*M* = 1.6), with over a third (*n* = 145; 39.4%) reporting no children and one (0.3%) reporting 10 children. One participant (0.3%) declined to answer, and two (0.5%) did not know how many children they had during the intake interview.

In terms of employment status, the majority of participants (*n* = 336; 91.3%) were not employed, but 30 (8.2%) were employed at least part-time upon entering LHFP. Employment status was missing at intake for two participants (0.5%). On average, participants reported just over $500 in income received in the 30 days prior to entering LHFP (*M* = 510.6), with 23 participants (6.3%) reporting no income and one (0.3%) reporting $3,374. Income information was missing for 11 LHFP participants (3%). In the 30 days before entering LHFP, just over one-half of participants (*n* = 186; 50.5%) reported that they did not have interaction with supportive family or friends (operationalized as social support), whereas 48.9% (*n* = 180) reportedly did have social

support. Two participants (0.5%) either declined to answer or did not know if they had social support in the 30 days prior to the intake interview.

Criminal Justice Involvement at Intake

Four measures of criminal justice involvement were collected from CSAT-GPRA interviews, including (1) *arrest days*, (2) *incarceration days*, (3) *awaiting trial or sentencing*, and (4) *supervision status* (see Table 5). Forty-seven participants (12.8%) were arrested at least once in the 30 days prior to entering LHFP. Participants reported an average of zero arrests in the 30 days before entering LHFP ($M = 0.3$), with 320 participants (87%) reporting zero arrests and one (0.3%) reporting 25 during this period. One participant (0.3%) declined to answer how many times they were arrested in the 30 days prior to entering LHFP. In addition, 44 participants (12%) were incarcerated for at least one of the 30 days prior to entering LHFP. On average, participants reported one day of incarceration in the 30 days prior to entering LHFP ($M = 0.6$), with most participants ($n = 324$; 88%) reporting zero days and one (0.3%) reporting 16 days of

Table 5.

Criminal justice involvement at intake

Variable	Response	% (*N*)	Mean (range)
Arrest days			0.3 (0 – 25)
Incarceration days			0.6 (0 – 16)
Awaiting trial	No	89.4% ($n = 329$)	
	Yes	10.6% ($n = 39$)	
Supervision status	None	88.0% ($n = 324$)	
	Probation/parole	11.4% ($n = 42$)	
CJI scale			0.5 (0 – 4)
0		73.1% ($n = 269$)	
1		11.7% ($n = 43$)	
2		8.4% ($n = 31$)	
3		5.7% ($n = 21$)	
4[a]		0.3% ($n = 1$)	
Initial CJI	No	73.1% ($n = 269$)	
	Yes	26.1% ($n = 96$)	

[a] Highest level of CJI

incarceration during this time. As they were entering LHFP, 39 participants (10.6%) were currently awaiting trial or sentencing, compared to the majority (n = 329; 89.4%) who were not. At the same time, 42 participants (11.4%) were currently subject to parole or probation supervision as they entered LHFP, compared to 324 (88%) who were not. Two participants (0.5%) were unsure as to their parole or probation status upon entering LHFP. As a group, LHFP participants scored low on the *CJI scale* (M = 0.5), with 269 (73.1%) reporting no criminal justice involvement at intake and one (0.3%) reporting arrest, incarceration, awaiting trial or sentencing, and probation or parole supervision (i.e., the highest level of criminal justice involvement) at intake. Overall, 96 participants (26.1%) reported at least one of the four types of criminal justice involvement at intake (i.e., *initial CJI*).

Mental Health Conditions at Intake

Four measures of mental health conditions were collected from CSAT-GPRA interviews, including (1) *depression days*, (2) *anxiety days*, (3) *hallucination days*, and (4) *impaired brain function days* (see Table 6). A majority of participants (n = 241; 65.5%) reported experiencing serious depression on at least one of the 30 days prior to entering LHFP. On average, participants reported experiencing depression on 11 of the 30 days before entering LHFP (M = 11.4), with 123 participants (33.4%) reporting no days and 84 (22.8%) reporting 30 days of serious depression. Four participants (1.1%) did not know. In addition, a majority of participants (n = 238; 64.7%) reported experiencing serious anxiety on at least one of the 30 days prior to entering LHFP. On average, participants reported experiencing anxiety on 12 of the 30 days before entering LHFP (M = 11.9), with

Table 6.

Mental health at intake

Variable	Response	% (*N*)	Mean (range)
Depression days			11.4 (0 – 30)
Anxiety days			11.9 (0 – 30)
Hallucination days			1.9 (0 – 30)
Impaired brain function days			11.3 (0 – 30)
Any mental health days[a]			9.1 (0 – 30)
Any mental health	No	18.5% (*n* = 68)	
	Yes	80.7% (*n* = 297)	

127 participants (34.5%) reporting no days and 97 (26.4%) reporting 30 days of serious anxiety. Three participants (0.8%) did not know.

Further, 51 participants (13.9%) reported experiencing hallucinations on at least one of the 30 days prior to entering LHFP. On average, participants experienced hallucinations twice in the 30 days prior to entering LHFP (*M* = 1.9), with 315 (85.6%) reporting no days and 15 (4.1%) reporting 30 days of hallucinations. Two participants (0.5%) did not know. In addition, over one-half of participants (*n* = 210; 57.1%) reported experiencing impaired brain function (i.e., trouble understanding, concentrating, or remembering) on at least one of the 30 days prior to entering LHFP. On average, participants reported impaired brain function on 11 of the 30 days before entering LHFP (*M* = 11.3), with 153 (41.6%) reporting no days of impaired brain function and 99 (26.9%) reporting 30 days. Five participants (1.4%) did not know. On average, participants reported experiencing some kind of mental health condition (i.e., *any mental health days*) on nine of the 30 days before entering LHFP (*M* = 9.1). Overall, 297 participants (80.7%) reported at least one day of serious depression, serious anxiety, hallucinations, or impaired brain function (i.e., *any mental health*) in the 30 days prior to intake.

Table 7.

Risky behavior at intake

Variable	Response	% (*N*)	Mean (range)
Violent behavior days			1.6 (0 – 30)
Alcohol use days			6.7 (0 – 30)
Illegal drug use days			2.0 (0 – 30)
Criminal behavior instances			3.1 (0 – 300)
Risky behavior scale			1.1 (0 – 4)
0		33.7% (*n* = 124)	
1		37.2% (*n* = 137)	
2		13.3% (*n* = 49)	
3		11.1% (*n* = 41)	
4[a]		4.1% (*n* = 15)	
Any risky behavior	No	33.7% (*n* = 124)	
	Yes	65.8% (*n* = 242)	

[a] Highest level of risky behavior

Risky Behavior at Intake

Four measures of risky behavior were collected from CSAT-GPRA interviews, including (1) *violent behavior days*, (2) *alcohol use days*, (3) *illegal drug use days*, and (4) *criminal behavior instances* (see Table 7). Fifty participants (13.6%) reported trouble controlling violent behavior for at least one of the 30 days prior to entering LHFP. On average, participants reported trouble controlling violent behavior on an average of two of the 30 days before entering LHFP (*M* = 1.6), with 316 participants (85.9%) reporting no days and nine (2.4%) reporting 30 days of trouble controlling violent behavior. One participant (0.3%) declined to answer, and one (0.3%) did not know. In addition, a majority of participants (*n* = 205; 55.7%) reported alcohol use on at least one of the 30 days prior to entering LHFP. On average, participants reported using alcohol on seven of the 30 days before entering LHFP (*M* = 6.7), with 162 participants (44%) reporting no alcohol use and 35 (9.5%) reporting alcohol use on all 30 days. One participant (0.3%) did not know.

At the same time, 81 participants (22%) reported illegal drug use on at least one of the 30 days prior to entering LHFP. On average, participants reported illegal drug use on two of the 30 days before entering LHFP ($M = 2.0$), with 286 participants (77.7%) reporting no illegal drug use and 12 (3.3%) reporting illegal drug use on all 30 days. One participant (0.3%) did not know. Further, 82 participants (22.3%) reported engaging in criminal behavior at least once in the 30 days prior to entering LHFP. On average, participants reported engaging in criminal behavior three times in the 30 days before entering LHFP ($M = 3.1$), with 285 participants (77.4%) reporting no criminal behavior and one (0.3%) reporting 300 instances of criminal behavior during this time. One participant (0.3%) declined to report their criminal behavior during the intake interview. As a group, participants scored low on the *risky behavior scale* ($M = 1.1$), with 124 (33.7%) reporting no risky behavior and 15 (4.1%) reporting trouble controlling violent behavior, alcohol use, illegal drug use, and criminal behavior (i.e., the highest level of risky behavior) in the 30 days prior to intake. Overall, 242 participants (65.8%) reported at least one type of risky behavior (i.e., *any risky behavior*) in the 30 days prior to intake.

LHFP Housing Outcomes

Upon entering LHFP, 100% ($n = 368$) of participants completed intake interviews and were assigned housing placements (see Table 8). Before the six-month interviews were conducted, nine participants (2.4%) left LHFP, due to death ($n = 7$; 1.9%), involuntary termination for nonparticipation ($n = 1$; 0.3%), and involuntary termination due to violation of rules ($n = 1$; 0.3%). Outcome information was missing for 16 participants (4.3%) who completed intake interviews. Thus, at six months, 343

Table 8.

LHFP housing status

	Intake	6-mo	12-mo	18-mo	24-mo	Post 24-mo	Total
Housed in program	368	343	255	184	137	91	
Interview	368	337	246	177	130		
No interview	0	6	9	7	7		
Moves	0	9	44	27	11	46	137
Forced	0	2	19	19	6	17	63
Rule violation	-	1	8	6	2	9	26
Incarceration	-	-	7	9	2	7	25
Nonparticipation	-	1	3	4	1	1	10
Other, unknown	-	-	1	-	1	-	2
Other	0	7	25	8	5	29	74
Death	-	7	13	4	1	7	32
Transfer, health	-	-	2	-	1	-	3
Referral	-	-	1	-	1	1	3
Left	-	-	7	3	2	4	16
Disappeared	-	-	2	-	-	2	4
Completion	-	-	-	1	-	15	16
Moves (cumulative)	0	9	53	80	91	137	
Missing	0	16	44	44	36	0	140
Missing (cumulative)	0	16	60	104	140	140	

participants (93.2%) remained in LHFP. Among these individuals, 337 (98.3%) completed six-month interviews, and six (1.7%) did not.

A total of 53 participants (14.4%) left LHFP before the 12-month interviews, an increase of 44 participants (12.8% of total at six-mo.) between the six- and 12-month interviews. Of the remaining participants at six months (n = 343), 19 (5.5%) were involuntarily terminated from LHFP before the 12-month interviews due to: violation of rules (n = 8, 2.3%); incarceration (n = 7, 2%); nonparticipation (n = 3; 0.9%); and other, unknown reasons (n = 1; 0.3%). An additional 25 participants (7.3%) left LHFP before the 12-month interviews for other reasons: 13 (3.8%) due to death; seven (2%) on their own against staff advice; two (0.6%) due to transfer to another facility for health reasons; two (0.6%) due to loss of contact/disappearing; and one (0.3%) due to referral to another program or service. Outcome information was missing for 44 participants (12.8%) who

completed six-month interviews. Thus, at 12 months, 255 participants (74.3% of total at six-mo.; 69.3% of total at intake) remained in LHFP. Among these individuals, 246 (96.5%) completed 12-month interviews, and nine (3.5%) did not.

A total of 80 participants (21.7%) left LHFP before the 18-month interviews, an increase of 27 participants (10.6% of total at 12-mo.) between the 12- and 18-month interviews. Of the remaining participants at 12 months (n = 255), 19 (7.5%) were involuntarily terminated from LHFP before the 18-month interviews due to: incarceration (n = 9, 3.5%); violation of rules (n = 6; 2.4%); and nonparticipation (n = 4; 1.6%). An additional eight participants (3.1%) left LHFP before the 18-month interviews for other reasons: four (1.6%) due to death; three (1.2%) on their own against staff advice; and one participant (0.4%) who successfully completed LHFP (i.e., "graduated" to unassisted housing). Outcome information was missing for 44 participants (17.3%) who completed 12-month interviews. Thus, at 18 months, 184 participants (72.2% of total at 12-mo.; 50% of total at intake) remained in LHFP. Among these individuals, 177 (96.2%) completed 18-month interviews, and seven (3.8%) did not.

In total, 91 participants (24.7%) left LHFP before the 24-month interviews, an increase of 11 participants (6% of total at 18-mo.) between the 18- and 24-month interviews. Of the remaining participants at 18 months (n = 184), six (3.3%) were involuntarily terminated from LHFP before the 24-month interviews due to: violation of rules (n = 2; 1.1%); incarceration (n = 2; 1.1%); nonparticipation (n = 1; 0.5%); and other, unknown reasons (n = 1; 0.5%). An additional five participants (2.7%) left LHFP before the 24-month interviews for other reasons: two (1.1%) on their own against staff advice; one (0.5%) due to death; one (0.5%) due to transfer to another facility for health reasons;

and one (0.5%) due to referral to another program or service. Outcome information was missing for 36 participants (19.6%) who completed 18-month interviews. Thus, at 24 months, 137 participants (74.5% of total at 18-mo.; 37.2% of total at intake) remained in LHFP. Among these individuals, 130 (94.9%) completed 24-month interviews, and seven (5.1%) did not.

Overall, a total of 137 participants (37.2%) moved out of LHFP, including an additional 46 participants (33.6% of total at 24-mo.) who left at some point after the 24-month interviews. Of the participants who were housed at 24 months (n = 137), 17 (12.4%) were involuntarily terminated from LHFP after the 24-month interviews due to: violation of rules (n = 9; 6.6%); incarceration (n = 7, 5.1%); and nonparticipation (n = 1; 0.7%). An additional 29 participants (21.2%) left LHFP after the 24-month interviews for other reasons: an additional 15 participants (10.9%) successfully completed LHFP (in total, 16 of 368 participants; 4.3%); seven (5.1%) due to death; four (2.9%) on their own against staff advice; two (1.5%) due to loss of contact/disappearing; and one (0.7%) due to referral to another program or service. Ninety-one participants (66.4% of total at 24-mo.; 24.7% of total at intake) remained in the program after the 24-month interviews. Overall, outcome information was missing for a total of 140 participants (38%).

CHAPTER IV

RESULTS

This chapter presents the results of the statistical analyses performed to answer the three primary research questions. First, Pearson chi-square tests of independence and Welch independent samples *t*-tests (referred to as Welch *t*-tests) were conducted to examine whether or not LHFP participants with criminal justice involvement differed from those without criminal justice involvement with respect to demographics, mental health conditions, and risky behavior at program onset (i.e., intake).

1. *Do LHFP participants with criminal justice involvement differ from those without criminal justice involvement at program onset:*
    a. *with respect to demographics?*
    b. *with respect to mental health conditions?*
    c. *with respect to risky behavior?*

Participants were largely similar demographically, but those subject to probation or parole supervision were more likely to report social support at intake. Overall, participants with criminal justice involvement reported experiencing more mental health conditions in the 30 days prior to intake compared to those without criminal justice involvement, with the exception of impaired brain function. Likewise, participants with criminal justice involvement differed from those without with respect to engagement in risky behaviors in the 30 days prior to intake.

Next, Pearson chi-square tests of independence and Welch *t*-tests were performed to ascertain whether or not LHFP participants with criminal justice involvement differed from those without criminal justice involvement with respect to mental health conditions, risky behavior, and housing outcomes at specific intervals of program exposure (i.e., six, 12, 18, and 24 months).

2. *Do LHFP participants with past criminal justice involvement differ from those without past criminal justice involvement at specific intervals of program exposure:*
    a. *with respect to mental health conditions?*
    b. *with respect to risky behavior?*
    c. *with respect to housing outcomes?*

At six months, LHFP participants with and without initial CJI did not differ with respect to mental health conditions or housing outcomes but reported more risky behavior, with the exception of criminal behavior. At 12 months, participants with criminal justice involvement at intake generally reported more mental health conditions and risky behavior and were less likely to have a successful program outcome (i.e., more likely to be terminated from LHFP) compared to their counterparts. At 18 months, no differences were observed with respect to mental health conditions, but participants with initial CJI reported more alcohol use and were less likely to have a successful program outcome compared to those without past criminal justice involvement. At 24 months, participants subject to community supervision at intake reported fewer days of experiencing mental health conditions and fewer days of trouble controlling violent behavior compared to those not on probation or parole at intake but were also less likely to remain housed through LHFP and less likely to have a successful program outcome.

Finally, binary logistic regression was used to determine whether or not criminal justice involvement among LHFP participants influences two measures of housing outcomes at 24 months:

3. *Does past criminal justice involvement among LHFP participants influence:*
    a. *housing stability at 24 months?*
    b. *program success at 24 months?*

Participant demographics, mental health conditions, and risky behavior were also considered for inclusion as possible predictors of housing outcomes. Along with several demographic variables, initial CJI was a significant predictor of both housing stability and program success at 24 months. The odds of remaining housed through LHFP and of having a successful program outcome at 24 months were lower for participants with initial CJI compared to those without.

Research Question One

Pearson chi-square tests of independence and Welch *t*-tests were performed to answer the first primary research question:

1. *Do LHFP participants with criminal justice involvement differ from those without criminal justice involvement at program onset?*

All assumptions for the use of the chi-square test of independence were met, unless stated otherwise (i.e., Fisher's exact tests were used for crosstabulation analyses with fewer than five expected counts), and rank transformations were applied in cases where the dependent variable did not meet assumptions of the Welch *t*-test. *Initial CJI* was measured categorically (no = 0, yes = 1) in these analyses and indicates whether or not a participant reported any of the four individual criminal justice involvement measures at intake. These four individual measures of criminal justice involvement (i.e., *arrest*, *incarceration*, *awaiting trial or sentencing*, and *supervision status*) were also used in

these analyses and were measured categorically (no = 0, yes = 1). The remaining measures of comparison included participant demographics, mental health conditions, risky behavior, and housing outcomes.

Do Participants with CJI Differ Demographically at Program Onset?

For each categorical variable (i.e., *gender*, *race*, *employment status*, and *social support*), a chi-square test of independence was performed to ascertain whether or not LHFP participants who had criminal justice involvement prior to intake were statistically different, at program onset, from those without criminal justice involvement. In addition, a Welch *t*-test was performed to analyze differences between participants with and without criminal justice involvement at intake for each continuous variable (i.e., *age*, *education*, *number of children*, and *income in the past 30 days*). Overall, no differences were observed between participants with and without criminal justice involvement (of any type) with respect to gender, race, age, education, number of children, employment status, or income as they entered LHFP. Participants with and without criminal justice involvement were also largely similar with respect to social support. However, those subject to community supervision were more likely to report interaction with supportive family and/or friends compared to their counterparts at intake.

Criminal Justice Involvement and Gender at Intake

Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and participant gender at intake. *Gender* was measured categorically (female = 0, male = 1) to test the null hypothesis:

> *H_0 = No difference is observed with respect to gender between participants with and without criminal justice involvement at intake*

Table 9.

Criminal justice involvement and gender at intake

CJI Type	*N*	χ^2	φ	*p*
Initial CJI	363	0.6	.04	.43
Arrest	365	<.01		1.0
Incarceration	366	0.1		.79
Awaiting trial or sentencing	366	2.9		.10
Supervision status	364	0.04		1.0

Note: When expected count < 5, Fisher's exact test used, φ omitted.

Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x male or female). Of participants with initial CJI, 91.7% were male compared to 88.8% of those without initial CJI. Overall, initial CJI was not related to participant gender, χ^2 (1, N = 363) = 0.6, φ = .04, p = .43. Likewise, Fisher's exact tests conducted using the individual criminal justice involvement measures were not significant (see Table 9), and therefore, the null hypothesis was not rejected. Among LHFP participants, those with criminal justice involvement at intake were not statistically different from those without criminal justice involvement with respect to gender.

Criminal Justice Involvement and Race at Intake

Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and race at intake. *Race* was measured categorically (nonwhite = 0, white = 1) to test the null hypothesis:

> *H_0 = No difference is observed with respect to race between participants with and without criminal justice involvement at intake*

Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x nonwhite/multiracial or not). Of participants with initial CJI, 50.5% reported their race as nonwhite or indicated more than one race compared to 51.3% of those without initial CJI. Overall, initial CJI was not associated with participant race, χ^2

Table 10.

Criminal justice involvement and race at intake

CJI Type	*N*	χ^2	*φ*	*p*
Initial CJI	360	0.2	.01	.89
Arrest	362	0.1	.01	.90
Incarceration	363	0.1	-.02	.72
Awaiting trial or sentencing	363	1.6	-.07	.21
Supervision status	361	0.7	.04	.41

(1, N = 360) = 0.2, φ = .01, p = .89. Likewise, additional chi-square tests of independence conducted using the individual criminal justice involvement measures were not significant (see Table 10), and therefore, the null hypothesis was not rejected. Among LHFP participants, those with criminal justice involvement at intake were not statistically different from those without criminal justice involvement with respect to race.

Criminal Justice Involvement and Age at Intake

Welch *t*-tests were performed to determine if participants with criminal justice involvement differ from those without criminal justice involvement with respect to average age at intake. *Age* was measured continuously in years (range 21 – 75) to test the null hypothesis:

> *H_0 = No difference is observed with respect to average age between participants with and without criminal justice involvement at intake*

Participants who reported initial CJI were slightly younger, on average (M = 47.5, SD = 8.3), compared to those without initial CJI (M = 48.8, SD = 8.5), but this difference was not statistically significant, t (172) = -1.2, p = .21. Likewise, no statistically significant differences based on any of the individual criminal justice involvement measures were found (see Table 11), and therefore, the null hypothesis was not rejected. Among LHFP participants, those with criminal justice involvement did not differ from those without criminal justice involvement with respect to average age at intake.

Table 11.

Criminal justice involvement and age at intake

	CJI			No CJI					
CJI Type	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***
Initial CJI	96	47.5	8.3	266	48.8	8.5	-1.2	172	.21
Arrest	47	48.0	7.3	317	48.5	8.7	-0.5	67	.64
Incarceration	44	48.5	7.1	321	48.5	8.7	-0.01	62	.99
Await trial	39	47.8	8.1	326	48.6	8.6	-0.6	49	.57
Supervision	42	47.3	8.8	321	48.6	8.4	-0.9	51	.37

Criminal Justice Involvement and Education at Intake

Welch *t*-tests were performed to determine if participants with criminal justice involvement differ from those without criminal justice involvement with respect to average years of education reported at intake. *Education* was measured continuously in years (range 0 – 16) to test the null hypothesis:

> *H_0 = No difference is observed with respect to average years of education between participants with and without criminal justice involvement at intake*

In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. Participants with initial CJI reported more mean years of education at intake ($M = 189.3$, $SD = 103.8$) compared to those without initial CJI ($M = 181.5$, $SD = 102.8$), but this difference was not statistically significant, $t\ (167) = 0.6$, $p = .53$. Likewise, no statistically

Table 12.

Criminal justice involvement and education at intake

	CJI			No CJI					
CJI Type	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***
Initial CJI	96	189.3 (11.8)	103.8 (2.2)	267	181.5 (11.6)	102.8 (2.3)	0.6	167	.53
Arrest	47	171.6 (11.4)	108.0 (2.3)	318	185.8 (11.7)	102.3 (2.3)	-0.8	59	.40
Incarceration	44	167.0 (11.3)	111.0 (2.4)	322	185.8 (11.7)	102.1 (2.3)	-1.1	53	.29
Await trial	39	196.9 (12.0)	103.1 (2.1)	327	181.9 (11.6)	103.3 (2.3)	0.9	48	.40
Supervision	42	194.8 (11.8)	108.0 (2.4)	322	181.6 (11.7)	102.7 (2.3)	0.7	51	.46

Note: Untransformed (unranked) means and standard deviations shown in parentheses.

significant differences based on any of the individual criminal justice involvement measures were found (see Table 12), and therefore, the null hypothesis was not rejected. Among LHFP participants, those with criminal justice involvement did not differ from those without criminal justice involvement with respect to average years of education reported at intake.

Criminal Justice Involvement and Number of Children at Intake

Welch *t*-tests were performed to determine if participants with criminal justice involvement differ from those without criminal justice involvement with respect to average number of children reported at intake. *Number of children* was measured continuously (range 0 – 10) to test the null hypothesis:

> *H_0 = No difference is observed between participants with and without criminal justice involvement with respect to average number of children at intake*

In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. Participants with initial CJI reported fewer children, on average, at intake ($M = 181.3$, $SD = 98$) compared to those without initial CJI ($M = 184.4$, $SD = 102.9$), but this difference was not statistically significant, $t\ (173) = -0.3$, $p = .80$. Likewise, no statistically significant differences based on any of the individual criminal justice involvement

Table 13.

Criminal justice involvement and number of children at intake

	CJI			No CJI					
CJI Type	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***
Initial CJI	95	181.3 (1.5)	98.0 (1.8)	267	184.4 (1.6)	102.9 (1.8)	-0.3	173	.80
Arrest	47	196.3 (1.8)	104.1 (2.1)	317	181.4 (1.5)	101.0 (1.8)	0.9	60	.36
Incarceration	44	198.2 (1.9)	103.0 (2.1)	321	180.9 (1.5)	101.2 (1.8)	1.0	55	.30
Await trial	38	174.3 (1.3)	93.0 (1.4)	327	184.0 (1.6)	102.4 (1.9)	-0.6	48	.55
Supervision	42	174.9 (1.4)	93.1 (1.9)	321	184.4 (1.6)	102.7 (1.8)	-0.6	55	.54

Note: Untransformed (unranked) means and standard deviations shown in parentheses.

measures were found (see Table 13), and therefore, the null hypothesis was not rejected. Among LHFP participants, those with criminal justice involvement did not differ from those without criminal justice involvement with respect to average number of children reported at intake.

Criminal Justice Involvement and Employment Status at Intake

Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and employment status at intake. *Employment status* was measured categorically (unemployed = 0, employed = 1) to test the null hypothesis:

> *H_0 = No difference is observed with respect to employment status between participants with and without criminal justice involvement at intake*

Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x employed or not). Of participants with initial CJI, 95.8% were not employed at intake compared to 90.6% of those without initial CJI. Overall, initial CJI was not associated with employment status at intake, χ^2 (1, N = 363) = 2.6, φ = -.09, p = .11. Fisher's exact tests conducted using the individual criminal justice involvement measures were not significant (see Table 14), and therefore, the null hypothesis was not rejected. Among LHFP participants, those with criminal justice involvement were not

Table 14.

Criminal justice involvement and employment status at intake

CJI Type	*N*	χ^2	φ	*p*
Initial CJI	363	2.6	-.09	.11
Arrest	365	2.7		.15
Incarceration	366	2.3		.15
Awaiting trial or sentencing	366	0.5		.76
Supervision status	364	0.7		.56

Note: When expected count < 5, Fisher's exact test used, φ omitted.

statistically different from those without criminal justice involvement with respect to employment status at intake.

Criminal Justice Involvement and Income at Intake

Welch *t*-tests were performed to determine if participants with and without criminal justice involvement differ with respect to average income reported in the 30 days prior to intake. *Income* was measured continuously in dollars (range 0 – 3374) to test the null hypothesis:

> *H_0 = No difference is observed with respect to average income reported in the past 30 days between participants with and without criminal justice involvement at intake*

In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. Participants with initial CJI reported higher average income in the 30 days prior to intake ($M = 182.1$, SD = 97.5) compared to those without initial CJI ($M = 178.5$, $SD = 104.4$), but this difference was not statistically significant, $t\ (175) = 0.3$, $p = .76$. Likewise, no statistically significant differences based on any of the individual criminal justice involvement measures were found (see Table 15), and therefore, the null hypothesis was not rejected. Among LHFP participants, those with criminal justice involvement were not statistically different from those without criminal justice involvement with respect to

Table 15.

Criminal justice involvement and income at intake

	CJI			No CJI					
CJI Type	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***
Initial CJI	94	182.1 (539.1)	97.5 (549.7)	260	178.5 (501.7)	104.4 (420.2)	0.3	175	.76
Arrest	47	190.0 (533.2)	99.0 (491.7)	309	176.9 (505.6)	103.5 (452.8)	0.8	62	.40
Incarceration	44	192.1 (543.6)	100.0 (502.3)	313	177.2 (505.9)	103.5 (451.7)	0.9	57	.36
Await trial	39	187.3 (487.6)	87.1 (336.2)	318	178.0 (513.4)	104.9 (470.7)	0.6	53	.54
Supervision	40	179.7 (579.7)	103.9 (655.2)	315	179.9 (504.6)	102.7 (426.9)	-0.01	49	.99

Note: Untransformed (unranked) means and standard deviations shown in parentheses.

average income reported in the 30 days prior to intake.

Criminal Justice Involvement and Social Support at Intake

Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and reporting social support at intake. *Social support* was measured categorically (no = 0, yes = 1) to test the null hypothesis:

> *H_0 = No difference is observed with respect to social support between participants with and without criminal justice involvement at intake*

Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants experiencing social support or not). Of participants with initial CJI, 53.1% reported that they had social support at intake compared to 48.1% of those without initial CJI. Overall, initial CJI was not associated with social support, χ^2 (1, N = 364) = 0.7, φ = .04, p = .40, but there was one weak but statistically significant association found between supervision status and reporting social support at intake. Of participants subject to community supervision at intake, 64.3% reported that they had social support compared to 47.5% of those who were not on probation or parole, χ^2 (1, N = 364) = 4.2, φ = .11, p = .04. Thus, the null hypothesis was rejected. Additional chi-square tests of independence conducted using the remaining individual criminal justice

Table 16.

Criminal justice involvement and social support at intake

CJI Type	*N*	χ^2	φ	*p*
Initial CJI	364	0.7	.04	.40
Arrest	366	2.6	-.08	.11
Incarceration	366	3.3	-.10	.07
Awaiting trial or sentencing	366	0.1	.02	.78
Supervision status	364	4.2	.11	.04

involvement measures were not significant (see Table 16). Among LHFP participants, those subject to probation or parole supervision were more likely to report interaction with supportive family or friends compared to their counterparts at intake.

Do Participants with CJI Differ on Mental Health at Program Onset?

Chi-square tests of independence were performed to ascertain whether or not criminal justice involvement among LHFP participants is associated with experiencing any mental health condition, serious depression, serious anxiety, hallucinations, or impaired brain function at program onset. Welch *t*-tests were also conducted to determine whether or not LHFP participants with criminal justice involvement differ from those without criminal justice involvement with respect to average number of days of mental health conditions reported in the 30 days prior to intake. Participants who were arrested or incarcerated in the past 30 days were more likely to report experiencing some kind of mental health condition at intake than their counterparts. Those with initial CJI and, in particular, those who were arrested, incarcerated, or awaiting trial or sentencing reported more mean days of some kind of mental health condition, on average, at intake compared to their counterparts.

Participants who were arrested or incarcerated in the past 30 days were more likely to report experiencing serious depression, and those who were arrested, incarcerated, or awaiting trial or sentencing prior to intake reported more days of depression, on average, at intake compared to their counterparts. Those awaiting trial or sentencing at intake were more likely to report and experienced more average days of serious anxiety compared to those who were not. Participants who were arrested, incarcerated, or awaiting trial or sentencing in the past 30 days were more likely to report

experiencing hallucinations at intake compared to their counterparts, and those with a history of arrest or incarceration reported more mean days of hallucinations in the 30 days prior to intake. No associations were found between criminal justice involvement of LHFP participants and experiencing impaired brain function at intake, and no differences were found between participants with and without any type of criminal justice involvement with respect to average days of impaired brain function reported at intake.

Criminal Justice Involvement and Any Mental Health at Intake

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to any mental health condition between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 17.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and experiencing any mental health condition at intake. *Any mental health* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported experiencing serious depression, serious anxiety, hallucinations, or impaired brain function in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants experiencing any mental health condition at intake or not). Of those with initial CJI, 86.3% reported experiencing some type of mental health condition at intake compared to 79.0% without initial CJI. Overall, initial CJI was not associated with experiencing any mental health condition at intake, χ^2 (1, N = 362) = 2.4, φ = .08, p = .13, but there were two weak but statistically

significant associations found between experiencing any mental health condition at intake and both arrest and incarceration. Of participants who were arrested in the 30 days prior to intake, 93.6% reported experiencing some kind of mental health condition compared to 79.2% of their counterparts, χ^2 (1, N = 364) = 5.4, φ = .12, p = .02. Likewise, 93.2% of those incarcerated prior to intake reported experiencing some kind of mental health condition at intake compared to 79.4% of participants who were not incarcerated, χ^2 (1, N = 365) = 4.6, φ = .11, p = .03, Additional chi-square tests of independence conducted using the remaining individual criminal justice involvement measures were not significant (see Table 17).

Welch *t*-test. Welch *t*-tests were also performed, for which *any mental health days* was measured continuously (range 0 – 30) and represents the average number of days of serious depression, serious anxiety, hallucinations, and impaired brain function experienced over the past 30 days (e.g., a value of 30 indicates 30 days each of depression, anxiety, hallucinations, and impaired brain function). Participants with initial CJI reported experiencing some type of mental health condition on an average of 10.7 days (*SD* = 8.5), while those without initial CJI reported an average of 8.6 days (*SD* = 8.0), a statistically significant difference, *t* (159) = 2.1, *p* = .04. Participants who were arrested in the 30 days prior to intake reported more average days of some type of mental health condition (*M* = 12.2, *SD* = 8.6) compared to those who were not arrested (*M* = 8.6, *SD* = 8.0), *t* (58) = 2.6, *p* = .01. Likewise, participants who reported incarceration in the 30 days prior to intake reported experiencing more days of any mental health condition on average (*M* = 12.0, *SD* = 8.7) compared to those who did not report incarceration at intake (*M* = 8.7, *SD* = 8.0), *t* (53) = 2.4, *p* = .02. Finally, those awaiting trial or sentencing

reported experiencing some type of mental health condition on an average of 12.8 days (SD = 9.1) at intake compared to 8.6 days (SD = 8.0) among their counterparts, t (45) = 2.7, p = .01. An additional Welch t-test conducted using the remaining individual criminal justice involvement measure was not significant (see Table 17).

Summary. The null hypothesis was rejected. Among LHFP participants, those who were arrested or incarcerated in the past 30 days were more likely to report experiencing any mental health condition at intake compared to their counterparts. Participants with initial CJI and, in particular, those who were arrested, incarcerated, or awaiting trial or sentencing in the past 30 days reported more days of experiencing some type of mental health condition, on average, at program onset. No association was found between supervision status of LHFP participants and experiencing any mental health condition at intake, and no difference was observed between participants who were subject to community supervision and those who were not with respect to average days of any mental health condition reported at intake.

Criminal Justice Involvement and Depression at Intake

Chi-square tests of independence and Welch t-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to depression between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 17.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and experiencing serious depression at intake. *Depression* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported experiencing serious

depression in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants experiencing serious depression at intake or not). Of participants with initial CJI, 71.9% reported experiencing serious depression compared to 64.5% without initial CJI. Overall, initial CJI was not associated with serious depression at intake, χ^2 (1, N = 361) = 1.7, φ = .07, p = .19, but there were two moderately weak but statistically significant associations found between experiencing serious depression and both arrest and incarceration at intake. Of participants who were arrested in the past 30 days, 83% reported experiencing serious depression at intake compared to 63.9% of their counterparts, χ^2 (1, N = 363) = 6.7, φ = .14, p = .01. Of participants who reported incarceration, 81.8% experienced serious depression in the past 30 days compared to 64.1% of participants who did not report incarceration at intake, χ^2 (1, N = 364) = 5.5, φ = .12, p = .02. Additional chi-square tests of independence conducted using the remaining individual criminal justice involvement measures were not significant (see Table 17).

Welch *t*-test. Welch *t*-tests were also performed, for which *depression days* was measured continuously (range 0 – 30). On average, participants with initial CJI reported serious depression on 13.4 days (*SD* = 12.8), while those without initial CJI reported an average of 10.7 days (*SD* = 11.8), but this difference was not statistically significant, t(157) = 1.9, p = .06. However, participants who were arrested in the past 30 days reported significantly more days of serious depression, on average, at intake (M = 15.7, *SD* = 13.0) compared to their counterparts (M = 10.8, *SD* = 11.9), t (58) = 2.5, p = .02. Likewise, those who were incarcerated in the past 30 days reported an average of 15.4 days of serious depression at intake (*SD* = 13.1) compared to 10.8 days (*SD* = 11.9) among those

who were not incarcerated, t (53) = 2.2, p = .03. Finally, those awaiting trial or sentencing reported experiencing significantly more days of serious depression, on average, at intake (M = 16.0, SD = 13.4) compared to those who were not (M = 10.8, SD = 11.8), t (45) = 2.3, p = .03. An additional Welch t-test conducted using the remaining individual criminal justice involvement measure was not significant (see Table 17).

Summary. The null hypothesis was rejected. Among LHFP participants, those who were arrested or incarcerated in the past 30 days were more likely to report experiencing serious depression at intake. Likewise, participants who reported arrest, incarceration, or awaiting trial or sentencing reported more mean days of serious depression at intake compared to their counterparts. No associations were found between initial CJI or supervision status of LHFP participants and experiencing serious depression, and no differences were observed between participants who reported initial CJI or probation or parole supervision and those who did not with respect to average days of serious depression reported at intake.

Criminal Justice Involvement and Anxiety at Intake

Chi-square tests of independence and Welch t-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to anxiety between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 17.

Chi-square. A chi-square test of independence was performed to determine if a relationship exists between criminal justice involvement of LHFP participants and experiencing anxiety at intake. *Anxiety* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported experiencing serious anxiety in the past 30

days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants experiencing serious anxiety at intake or not). Of participants with initial CJI, 70.8% reported experiencing serious anxiety at intake compared to 63.2% without initial CJI. Overall, initial CJI was not associated with experiencing anxiety at intake, χ^2 (1, N = 362) = 1.8, φ = .07, p = .18, but there was one weak but statistically significant association found between reporting serious anxiety at intake and awaiting trial or sentencing. Of those awaiting trial or sentencing, 79.5% reported experiencing serious anxiety at intake compared to 63.5% of their counterparts, χ^2 (1, N = 365) = 3.9, φ = .10, p = .05. Additional chi-square tests of independence conducted using the remaining individual criminal justice involvement measures were not significant (see Table 17).

Welch *t*-test. Welch *t*-tests were also performed, for which *anxiety days* was measured continuously (range 0 – 30). On average, participants with initial CJI reported experiencing serious anxiety on 13.6 days (*SD* = 12.9), while those without initial CJI reported an average of 11.4 days (*SD* = 12.3), but this difference was not statistically significant, *t* (161) = 1.5, *p* = .15. However, participants who were awaiting trial or sentencing reported experiencing significantly more days of serious anxiety, on average, at intake (*M* = 17.7, *SD* = 13.1) compared to their counterparts (*M* = 11.2, *SD* = 12.2), *t* (46) = 3.0, *p* = .01. Additional Welch *t*-tests conducted using the remaining individual criminal justice involvement measures were not significant (see Table 17).

Summary. The null hypothesis was rejected. Among LHFP participants, those awaiting trial or sentencing were more likely to report and experienced more days of serious anxiety, on average, at intake compared to their counterparts. No associations

were found between initial CJI, arrest, incarceration, or supervision status of LHFP participants and experiencing serious anxiety at intake. Likewise, no differences were observed between participants who reported initial CJI, arrest, incarceration, or community supervision and those who did not with respect to average days of serious anxiety reported at intake.

Criminal Justice Involvement and Hallucinations at Intake

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to hallucinations between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 17.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and experiencing hallucinations at intake. *Hallucinations* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported experiencing hallucinations in the past 30 days. Data were analyzed using a 2 x 2 χ^2 ((participants experiencing criminal justice involvement or not x participants experiencing hallucinations at intake or not). Of participants with initial CJI, 18.8% reported experiencing hallucinations at intake compared to 12.4% without initial CJI. Overall, initial CJI was not associated with experiencing hallucinations, χ^2 (1, N = 363) = 2.4, φ = .08, p = .12, but there were three moderately weak but statistically significant associations found between experiencing hallucinations at intake and arrest, incarceration, and awaiting trial or sentencing. Of participants who were arrested in the past 30 days, 27.7% reported experiencing hallucinations at intake compared to 11.9% of their counterparts, χ^2 (1, N = 365) = 8.4, φ =

.15, $p < .01$. Of those who reported incarceration, 27.3% reported experiencing hallucinations compared to 12.1% of participants who were not incarcerated prior to intake, χ^2 (1, $N = 366$) = 7.4, φ = .14, $p = .01$. Of participants awaiting trial or sentencing, 25.6% reported experiencing hallucinations at intake compared to 12.5% of their counterparts, χ^2 (1, $N = 366$) = 5.0, φ = .12, $p = .03$. An additional chi-square test of independence conducted using the remaining individual criminal justice involvement measure was not significant (see Table 17).

Welch *t*-test. Welch *t*-tests were also performed, for which *hallucination days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text and in Table 17; all untransformed values can be found in Table 19.) On average, participants with initial CJI reported experiencing more days of hallucinations ($M = 192.2$, $SD = 71.7$) compared to those without initial CJI ($M = 180.7$, $SD = 60.7$), but this difference was not statistically significant, t (147) = 1.4, $p = .16$. However, participants who were arrested in the past 30 days reported experiencing significantly more days of hallucinations, on average, at intake ($M = 208.3$, $SD = 82.6$) compared to their counterparts ($M = 179.9$, $SD = 59.8$), t (53) = 2.3, $p = .03$. Likewise, those who were incarcerated prior to intake reported significantly more mean days of hallucinations at intake ($M = 207.4$, $SD = 81.9$) compared to those who were not incarcerated in the past 30 days ($M = 180.2$, $SD = 60.2$), t (50) = 2.1, $p = .04$. Additional Welch *t*-tests conducted using the remaining individual criminal justice involvement measures were not significant (see Table 17).

Summary. The null hypothesis was rejected. Among LHFP participants, those who were arrested, incarcerated, or awaiting trial or sentencing in the past 30 days were more likely to report experiencing hallucinations at intake compared to their counterparts. Likewise, participants who reported arrest or incarceration experienced more days of hallucinations, on average, compared to their counterparts at intake. No associations were found between initial CJI or supervision status of LHFP participants and experiencing hallucinations at intake, and no differences were observed between participants who did and did not report initial CJI or community supervision with respect to average days of hallucinations reported at intake.

Criminal Justice Involvement and Impaired Brain Function at Intake

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to impaired brain function between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 17.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and experiencing impaired brain function at intake. *Impaired brain function* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported experiencing trouble understanding, concentrating, or remembering in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants experiencing impaired brain function at intake or not). Of participants with initial CJI, 64.2% reported experiencing impaired brain function at

intake compared to 55.8% without initial CJI. Overall, initial CJI was not associated with impaired brain function at intake, χ^2 (1, N = 360) = 2.0, φ = .08, p = .16. Likewise, additional chi-square tests of independence conducted using the individual criminal justice involvement measures were not significant (see Table 17).

Welch *t*-test. Welch *t*-tests were also performed, for which *impaired brain function days* was measured continuously (range 0 – 30). Participants with initial CJI reported an average of 13.5 days of impaired brain function (*SD* = 13.0) at intake, while those without initial CJI reported an average of 10.6 days (*SD* = 12.7), but this difference was not statistically significant, t (162) = 1.9, p = .07. Likewise, additional Welch *t*-tests conducted using the individual criminal justice involvement measures were not significant (see Table 17).

Summary. The null hypothesis was not rejected. Among LHFP participants, no statistically significant associations were found between criminal justice involvement of LHFP participants and experiencing impaired brain function at intake. Likewise, no differences were observed between participants with and without any and all types of criminal justice involvement with respect to average days of impaired brain function reported at intake.

Do Participants with CJI Differ on Risky Behavior at Program Onset?

Chi-square tests of independence were performed to ascertain whether or not criminal justice involvement among LHFP participants is associated with engagement in risky behavior at program onset. Likewise, Welch *t*-tests were conducted to determine whether or not LHFP participants with and without criminal justice involvement differ with respect to average risky behavior scores, average days of trouble controlling violent

Table 17.

Criminal justice involvement and mental health at intake

		CJI			No CJI			*t*-test			χ^2 test		
Measure	**CJI Type**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	φ	***p***
Any mental health	Initial CJI	96	10.7	8.5	266	8.6	8.0	2.1	159	.04	2.4	.08	.13
	Arrest	47	12.2	8.6	317	8.6	8.0	2.6	58	.01	5.4	.12	.02
	Incarceration	44	12.0	8.7	321	8.7	8.0	2.4	53	.02	4.6	.11	.03
	Awaiting	39	12.8	9.1	326	8.6	8.0	2.7	45	.01	1.0	.05	.32
	Supervision	42	9.1	7.9	321	9.1	8.2	-0.04	53	.97	<.01	<.01	.96
Depression	Initial CJI	96	13.4	12.8	265	10.7	11.8	1.9	157	.06	1.7	.07	.19
	Arrest	47	15.7	13.0	316	10.8	11.9	2.5	58	.02	6.7	.14	.01
	Incarceration	44	15.4	13.1	320	10.8	11.9	2.2	53	.03	5.5	.12	.02
	Awaiting	39	16.0	13.4	325	10.8	11.8	2.3	45	.03	1.3	.06	.26
	Supervision	42	12.0	12.4	320	11.3	12.1	0.4	52	.72	<.01	<.01	.96
Anxiety	Initial CJI	96	13.6	12.9	266	11.4	12.3	1.5	161	.15	1.8	.07	.18
	Arrest	47	15.4	13.3	317	11.4	12.3	2.0	58	.06	0.6	.04	.43
	Incarceration	44	15.3	13.6	321	11.5	12.3	1.8	53	.08	0.2	.02	.66
	Awaiting	39	17.7	13.1	326	11.2	12.2	3.0	46	.01	3.9	.10	.05
	Supervision	42	10.2	11.3	321	12.2	12.6	-1.1	55	.30	0.3	.03	.59
Hallucinations[a]	Initial CJI	96	192.2	71.7	267	180.7	60.7	1.4	147	.16	2.4	.08	.12
	Arrest	47	208.3	82.6	318	179.9	59.8	2.3	53	.03	8.4	.15	<.01
	Incarceration	44	207.4	81.9	322	180.2	60.2	2.1	50	.04	7.4	.14	.01
	Awaiting	39	205.3	81.9	327	180.9	60.8	1.8	43	.08	5.0	.12	.03
	Supervision	42	175.7	55.4	322	184.7	64.9	-1.0	57	.34	0.8	-.05	.37
Impaired brain function	Initial CJI	95	13.5	13.0	265	10.6	12.7	1.9	162	.07	2.0	.08	.16
	Arrest	47	14.1	13.2	315	10.9	12.7	1.6	59	.12	0.8	.05	.39
	Incarceration	44	14.1	13.2	319	10.9	12.7	1.5	54	.13	0.7	.04	.41
	Awaiting	38	14.1	12.8	325	10.9	12.7	1.5	46	.15	1.1	.06	.30
	Supervision	41	12.9	12.5	320	11.1	12.8	0.8	51	.40	1.2	.06	.27

[a] Rank transformation applied to variable, transformed (ranked) means and standard deviations shown.

Table 18.

Criminal justice involvement and risky behavior at intake

		CJI			No CJI			*t*-test			χ^2 test		
Measure	**CJI Type**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	φ	***p***
Any risky behavior	Initial CJI	96	1.5	1.3	267	1.0	1.0	3.8	144	<.01	7.0	.14	.01
	Arrest	47	2.0	1.1	318	1.0	1.1	6.0	60	<.01	18.0	.22	<.01
	Incarceration	44	2.0	1.2	322	1.0	1.1	5.4	53	<.01	13.7	.19	<.01
	Awaiting	39	2.0	1.3	327	1.1	1.1	4.1	44	<.01	8.6	.15	<.01
	Supervision	42	1.1	1.2	322	1.2	1.1	-0.4	50	.71	0.3	-.03	.56
Violent behavior[a]	Initial CJI	96	200.7	78.1	267	177.6	56.1	2.7	132	.01	9.2	.16	<.01
	Arrest	47	226.7	91.9	318	177.2	55.2	3.6	51	<.01	23.0	.25	<.01
	Incarceration	44	222.6	90.5	322	178.2	56.6	3.2	48	<.01	17.7	.22	<.01
	Awaiting	39	201.2	79.3	327	181.4	60.8	1.5	43	.14	3.3	.10	.07
	Supervision	42	196.1	72.9	322	182.0	61.9	1.2	49	.24	2.4	.08	.12
Alcohol use[a]	Initial CJI	96	215.7	104.6	268	172.6	98.1	3.5	159	<.01	8.9	.16	<.01
	Arrest	47	249.3	94.1	319	174.7	98.9	5.0	62	<.01	15.9	.21	<.01
	Incarceration	44	248.5	95.3	323	175.2	99.0	4.8	56	<.01	13.7	.19	<.01
	Awaiting	39	247.3	92.5	328	176.5	99.8	4.5	49	<.01	14.6	.20	<.01
	Supervision	42	168.2	97.7	323	185.7	102.0	-1.1	53	.28	0.6	-.04	.44
Illegal drug use[a]	Initial CJI	96	191.2	81.7	268	181.2	75.1	1.0	156	.30	1.3	.06	.26
	Arrest	47	207.4	91.1	319	180.7	74.3	1.9	55	.06	4.4	.11	.04
	Incarceration	44	206.8	90.2	323	180.9	74.6	1.8	51	.07	4.2	.11	.04
	Awaiting	39	219.9	89.1	328	179.7	74.4	2.7	45	.01	11.7	.18	<.01
	Supervision	42	173.8	69.3	323	185.0	77.8	-1.0	55	.34	0.8	-.05	.38
Criminal behavior[a]	Initial CJI	95	209.6	89.0	269	174.8	70.7	3.5	138	<.01	15.8	.21	<.01
	Arrest	46	237.6	93.4	320	176.4	71.8	4.3	53	<.01	26.8	.27	<.01
	Incarceration	44	238.4	94.0	323	176.6	71.8	4.2	50	<.01	25.8	.27	<.01
	Awaiting	38	224.3	92.9	329	179.3	74.1	2.9	43	.01	12.3	.18	<.01
	Supervision	42	176.4	70.5	323	184.7	78.1	-0.7	55	.48	0.3	-.03	.60

[a] Rank transformation applied to variable, transformed (ranked) means and standard deviations shown.

behavior, alcohol use, and illegal drug use, and average instances of criminal behavior reported in the 30 days prior to intake. Participants with initial CJI and, in particular, those who reported arrest, incarceration, or awaiting trial or sentencing were more likely to report any risky behavior and had higher average scores on the risky behavior scale compared to their counterparts at intake. Trouble controlling violent behavior was more likely and reported more often, on average, among those who reported initial CJI, arrest, or incarceration at intake. Likewise, participants who reported initial CJI, arrest, incarceration, or awaiting trial or sentencing at intake were more likely to report and engaged in more mean days of alcohol use in the 30 days prior to intake compared to their counterparts.

Illegal drug use was more likely to be reported at intake among participants who reported arrest, incarceration, or awaiting trial or sentencing, and those awaiting trial or sentencing reported more mean days of illegal drug use compared to their counterparts. Finally, participants who reported initial CJI, arrest, incarceration, or awaiting trial or sentencing at intake were more likely to report and engaged in more instances of criminal behavior, on average, compared to their counterparts at intake. No associations were found between supervision status of LHFP participants and any measure of risky behavior at intake, and participants who were subject to community supervision did not differ from their counterparts with respect to average risky behavior scores, average days of trouble controlling violent behavior, alcohol use, or illegal drug use, or average instances of criminal behavior reported at intake.

Criminal Justice Involvement and Any Risky Behavior at Intake

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to any risky behavior between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 18.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and engaging in risky behavior at intake. *Any risky behavior* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported trouble controlling violent behavior, alcohol use, illegal drug use, or criminal behavior in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants reporting any risky behavior at intake or not). Of participants with initial CJI, 73.0% reported some type of risky behavior at intake compared to 62.1% without initial CJI. Overall, initial CJI was associated with risky behavior at intake, χ^2 (1, N = 363) = 7.0, φ = .14, p = .01.

In addition, there were three moderately weak but statistically significant associations found between engaging in any risky behavior and arrest, incarceration, and awaiting trial or sentencing at intake. Of participants who reported arrest in the past 30 days, 93.5% reported some type of risky behavior at intake compared to 62.3% of their counterparts, χ^2 (1, N = 365) = 18.0, φ = .22, p < .01. Of participants who reported incarceration, 90.9% reported some type of risky behavior compared to 62.6% of those who did not, χ^2 (1, N = 366) = 13.7, φ = .19, p < .01. Of those awaiting trial or sentencing, 86.8% reported some type of risky behavior at intake compared to 63.6% of their

counterparts, χ^2 (1, N = 366) = 8.6, φ = .15, p < .01. An additional chi-square test of independence conducted using the remaining individual criminal justice involvement measure was not significant (see Table 18).

Welch *t*-test. Welch *t*-tests were also performed, for which any risky behavior was measured continuously using the *risky behavior scale* (range 0 – 4), which indicates a participant's level of engagement in risky behavior at intake (e.g., a value of four indicates the highest level—trouble controlling violent behavior, alcohol use, illegal drug use, and criminal behavior in the past 30 days). On average, participants with initial CJI scored significantly higher on the risky behavior scale (M = 1.5, SD = 1.3) compared to those without initial CJI (M = 1.0, SD = 1.0), t (144) = 3.8, p < .01. Participants who were arrested in the past 30 days had an average score of 2.0 (SD = 1.1), while their counterparts had an average score of 1.0 (SD = 1.1), t (60) = 6.0, p < .01. Those who were incarcerated in the past 30 days, on average, scored significantly higher (M = 2.0, SD = 1.2) compared to those who were not (M = 1.0, SD = 1.1), t (53) = 5.4, p < .01. Participants who were awaiting trial or sentencing at intake had an average score of 2.0 (SD = 1.3), while their counterparts scored significantly lower (M = 1.1, SD = 1.1), t (44) = 4.1, p < .01. An additional Welch *t*-test conducted using the remaining individual criminal justice involvement measure was not significant (see Table 18).

Summary. The null hypothesis was rejected. Among LHFP participants, those with initial CJI and, in particular, those who were arrested, incarcerated, or awaiting trial or sentencing in the past 30 days were more likely to report engaging in some type of risky behavior and had higher average scores on the risky behavior scale compared to their counterparts at intake. No association was found between supervision status of

Table 19.

Untransformed values, intake

		CJI			No CJI		
Measure	**CJI Type**	***N***	***M***	***SD***	***N***	***M***	***SD***
Hallucinations	Initial CJI	96	2.4	7.0	267	1.7	6.3
	Arrest	47	3.5	8.4	318	1.6	6.1
	Incarceration	44	3.2	8.0	322	1.7	6.2
	Awaiting trial	39	3.5	8.5	327	1.7	6.2
	Supervision	42	1.5	5.5	322	1.9	6.6
Violent behavior	Initial CJI	96	2.8	7.4	267	1.2	4.9
	Arrest	47	5.5	9.9	318	1.0	4.5
	Incarceration	44	5.1	9.7	322	1.1	4.7
	Awaiting trial	39	3.2	8.3	327	1.4	5.3
	Supervision	42	1.1	2.8	322	1.7	6.0
Alcohol use	Initial CJI	96	10.0	11.7	268	5.5	8.9
	Arrest	47	13.0	12.1	319	5.8	9.2
	Incarceration	44	13.0	12.1	323	5.8	9.3
	Awaiting trial	39	12.7	12.3	328	6.0	9.4
	Supervision	42	5.1	8.6	323	6.9	10.1
Illegal drug use	Initial CJI	96	2.3	6.5	268	1.9	6.1
	Arrest	47	3.9	8.5	319	1.7	5.8
	Incarceration	44	3.5	7.8	323	1.8	5.9
	Awaiting trial	39	2.3	5.0	328	2.0	6.3
	Supervision	42	1.5	5.5	323	2.1	6.3
Criminal behavior	Initial CJI	95	6.4	31.7	269	1.9	7.4
	Arrest	46	10.6	44.3	320	2.0	7.7
	Incarceration	44	11.1	45.3	323	2.0	7.7
	Awaiting trial	38	4.5	11.3	329	2.9	18.0
	Supervision	42	1.5	5.5	323	3.3	18.4

LHFP participants and engaging in any risky behavior, and no difference was observed with respect to average risky behavior scores between participants who were and were not subject to probation or parole supervision at intake.

Criminal Justice Involvement and Violent Behavior at Intake

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to trouble controlling violent behavior between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 18.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and experiencing trouble controlling violent behavior at intake. *Violent behavior* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported experiencing trouble controlling violent behavior in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants experiencing trouble controlling violent behavior at intake or not). Of participants with initial CJI, 22.9% reported trouble controlling violent behavior at intake compared to 10.5% without initial CJI. Overall, initial CJI was associated with violent behavior at intake, χ^2 (1, N = 363) = 9.2, φ = .16, $p < .01$.

In addition, there were two moderately weak but statistically significant associations found between reporting trouble controlling violent behavior at intake and both arrest and incarceration. Of participants who reported arrest in the past 30 days, 36.2% reported experiencing trouble controlling violent behavior at intake compared to 10.4% of those who did not report arrest at intake, χ^2 (1, N = 365) = 23.0, φ = .22, $p < .01$. Of those incarcerated prior to intake, 34.1% reported trouble controlling violent behavior compared to 10.9% of their counterparts, χ^2 (1, N = 366) = 17.7, φ = .22, $p < .01$. Additional chi-square tests of independence conducted using the remaining individual criminal justice involvement measures were not significant (see Table 18).

Welch *t*-test. Welch *t*-tests were also performed, for which *violent behavior days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text and in Table 18; all untransformed values can be found in Table 19.) On

average, those with initial CJI reported significantly more days of trouble controlling violent behavior at intake (M = 200.7, SD = 78.1) compared to those without initial CJI (M = 177.6, SD = 56.1), t (132) = 2.7, p = .01. Likewise, participants who were arrested in the past 30 days experienced significantly more days of trouble controlling violent behavior, on average, at intake (M = 226.7, SD = 91.9) compared to their counterparts (M = 177.2, SD = 55.2), t (51) = 3.6, p < .01. Those incarcerated prior to intake also reported significantly more mean days of trouble controlling violent behavior (M = 222.6, SD = 90.5) compared to those who did not report incarceration at intake (M = 178.2, SD = 56.6), t (48) = 3.2, p < .01. Additional Welch t-tests conducted using the remaining individual criminal justice involvement measures were not significant (see Table 18).

Summary. The null hypothesis was rejected. Among LHFP participants, those with initial CJI and, in particular, those with a history of arrest or incarceration were more likely to report and experienced more mean days of trouble controlling violent behavior compared to their counterparts at intake. No associations were found between awaiting trial or sentencing or supervision status and experiencing trouble controlling violent behavior at intake. Likewise, no differences were observed between participants who did and did not report awaiting trial or sentencing or community supervision with respect to average days of trouble controlling violent behavior reported at intake.

Criminal Justice Involvement and Alcohol Use at Intake

Chi-square tests of independence and Welch t-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to alcohol use between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 18.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and reporting alcohol use at intake. *Alcohol use* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported using alcohol in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants reporting alcohol use at intake or not). Of participants with initial CJI, 68.8% reported using alcohol in the past 30 days compared to 51.1% without initial CJI. Overall, initial CJI was associated with alcohol use at intake, χ^2 (1, N = 364) = 8.9, φ = .16, p < .01.

In addition, there were three moderately weak but statistically significant associations found between reporting alcohol use at intake and arrest, incarceration, and awaiting trial or sentencing. Of participants who reported arrest in the past 30 days, 83.0% reported alcohol use at intake compared to 52.0% of their counterparts, χ^2 (1, N = 366) = 15.9, φ = .21, p < .01. Of participants who were incarcerated prior to intake, 81.8% reported alcohol use in the past 30 days compared to 52.3% of those who were not incarcerated, χ^2 (1, N = 367) = 13.7, φ = .19, p < .01. Of participants awaiting trial or sentencing, 84.6% reported alcohol use at intake compared to 52.4% of their counterparts, χ^2 (1, N = 367) = 14.6, φ = .20, p < .01. An additional chi-square test of independence conducted using the remaining individual criminal justice involvement measure was not significant (see Table 18).

Welch *t*-test. Welch *t*-tests were also performed, for which *alcohol use days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text

and in Table 18; all untransformed values can be found in Table 19.) On average, those with initial CJI reported significantly more days of alcohol use at intake ($M = 215.7$, $SD = 104.6$) compared to those without initial CJI ($M = 172.6$, $SD = 98.1$), $t\ (159) = 3.5$, $p < .01$. Likewise, participants who were arrested in the past 30 days reported more mean days of alcohol use ($M = 249.3$, $SD = 94.1$) compared to their counterparts ($M = 174.7$, $SD = 98.9$), $t\ (62) = 5.0$, $p < .01$. On average, alcohol use was reported on more days ($M = 248.5$, $SD = 95.3$) among those who were incarcerated in the past 30 days compared those who were not ($M = 175.2$, $SD = 99.0$), $t\ (56) = 4.8$, $p < .01$. Likewise, participants awaiting trial or sentencing reported more mean days of alcohol use at intake ($M = 247.3$, $SD = 92.5$) compared to their counterparts ($M = 176.5$, $SD = 99.8$), $t\ (49) = 4.5$, $p < .01$. An additional Welch *t*-test conducted using the remaining individual criminal justice involvement measure was not significant (see Table 18).

Summary. The null hypothesis was rejected. Among LHFP participants, those with initial CJI and, in particular, those who were arrested, incarcerated, or awaiting trial or sentencing in the past 30 days were more likely to report and engaged in more days of alcohol use, on average, compared to their counterparts at intake. No association was found between supervision status of LHFP participants and reporting alcohol use at intake, and no differences were observed between participants who were and were not subject to probation or parole supervision with respect to average days of alcohol use reported at intake.

Criminal Justice Involvement and Illegal Drug Use at Intake

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

H_0 = No difference is observed with respect to illegal drug use between participants with and without criminal justice involvement at intake

Results are presented below and summarized in Table 18.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and reporting illegal drug use at intake. *Illegal drug use* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported engaging in illegal drug use in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants reporting illegal drug use at intake or not). Of participants with initial CJI, 26.0% reported using illegal drugs in the 30 days prior to intake compared to 20.5% without initial CJI. Overall, initial CJI was not associated with illegal drug use, χ^2 (1, N = 364) = 1.3, φ = .06, p = .26, but there were three weak but statistically significant associations found between engaging in illegal drug use and arrest, incarceration, and awaiting trial or sentencing at intake. Of participants who were arrested in the past 30 days, 34.0% reported illegal drug use at intake compared to 20.4% of their counterparts, χ^2 (1, N = 366) = 4.4, φ = .11, p = .04. Illegal drug use was reported by 34.1% of those incarcerated in the past 30 days compared to 20.4% of those who were not, χ^2 (1, N = 367) = 4.2, φ = .11, p = .04. Of participants awaiting trial or sentencing, 43.6% reported illegal drug use at intake compared to 19.5% of their counterparts, χ^2 (1, N = 367) = 11.7, φ = .18, p < .01. An additional chi-square test of independence conducted using the remaining individual criminal justice involvement measure was not significant (see Table 18).

Welch *t*-test. Welch *t*-tests were also performed, for which *illegal drug days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-

test, a rank transformation was applied. (Transformed/ranked values are presented in text and in Table 18; all untransformed values can be found in Table 19.) On average, those with initial CJI reported more days of illegal drug use (M = 191.2, SD = 81.7) compared to those without initial CJI (M = 181.2, SD = 75.1), but this difference was not statistically significant, t (156) = 1.0, p = .30. However, participants who were awaiting trial or sentencing at intake reported significantly more days of illegal drug use, on average, at intake (M = 219.9, SD = 89.1) compared to their counterparts (M = 179.7, SD = 74.4), t (45) = 2.7, p = .01. Additional Welch t-tests conducted using the remaining individual criminal justice involvement measures were not significant (see Table 18).

Summary. The null hypothesis was rejected. Among LHFP participants, those who reported arrest, incarceration, or awaiting trial or sentencing at intake were more likely to report engaging in illegal drug use in the past 30 days compared to their counterparts. Likewise, participants who were awaiting trial or sentencing reported engaging in more mean days of illegal drug use in the past 30 days compared to those who were not. No associations were found between initial CJI or supervision status of LHFP participants and engaging in illegal drug use at intake. Likewise, no differences were observed between participants who did and did not report initial CJI, arrest, incarceration, or community supervision with respect to average days of illegal drug use reported at intake.

Criminal Justice Involvement and Criminal Behavior at Intake

Chi-square tests of independence and Welch t-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to criminal behavior between participants with and without criminal justice involvement at intake*

Results are presented below and summarized in Table 18.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between criminal justice involvement of LHFP participants and reporting criminal behavior at intake. *Criminal behavior* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported engaging in criminal behavior in the past 30 days. Data were analyzed using a 2 x 2 χ^2 (participants experiencing criminal justice involvement or not x participants reporting criminal behavior at intake or not). Of participants with initial CJI, 36.8% reported engaging in criminal behavior in the past 30 days compared to 17.1% without initial CJI. Overall, initial CJI was associated with criminal behavior at intake, χ^2 (1, N = 364) = 15.8, φ = .21, $p < .01$.

In addition, there were three moderately weak but statistically significant associations found between reporting criminal behavior at intake and arrest, incarceration, and awaiting trial or sentencing. Of participants who were arrested in the past 30 days, 52.2% reported engaging in criminal behavior at intake compared to 18.1% of their counterparts, χ^2 (1, N = 366) = 26.8, φ = .27, $p < .01$. Of participants who reported incarceration at intake, 52.3% reportedly engaged in criminal behavior in the past 30 days compared to 18.3% of those who did not report incarceration at intake, χ^2 (1, N = 367) = 25.8, φ = .27, $p < .01$. Likewise, 44.7% of participants who were awaiting trial or sentencing reported engaging in criminal behavior at intake compared to 19.8% of their counterparts, χ^2 (1, N = 367) = 12.3, φ = .18, $p < .01$. An additional chi-square test of independence conducted using the remaining individual criminal justice involvement measure was not significant (see Table 18).

Welch *t*-test. Welch *t*-tests were also performed, for which *criminal behavior instances* was measured continuously (range 0 – 300). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text and in Table 18; all untransformed values can be found in Table 19.) On average, those with initial CJI reported significantly more instances of criminal behavior at intake ($M = 209.6$, $SD = 89.0$) compared to those without initial CJI ($M = 174.8$, $SD = 70.7$), $t\ (138) = 3.5$, $p < .01$. Participants who were arrested in the past 30 days reported significantly more average instances of criminal behavior at intake ($M = 237.6$, $SD = 93.4$) compared to their counterparts ($M = 176.4$, $SD = 71.8$), $t\ (53) = 4.3$, $p < .01$. Those incarcerated prior to intake also reportedly engaged in more criminal behavior, on average, at intake ($M = 238.4$, $SD = 94.0$) compared to those who were not ($M = 176.6$, $SD = 71.8$), $t\ (50) = 4.2$, $p < .01$. In addition, those awaiting trial or sentencing reported engaging in significantly more instances of criminal behavior, on average, at intake ($M = 224.3$, $SD = 92.9$) at intake compared to their counterparts ($M = 179.3$, $SD = 74.1$), $t\ (43) = 2.9$, $p = .01$. An additional Welch *t*-test conducted using the remaining individual criminal justice involvement measure was not significant (see Table 18).

Summary. The null hypothesis was rejected. Among LHFP participants, those with initial CJI and, in particular, those who were arrested, incarcerated, or awaiting trial or sentencing in the past 30 days were more likely to report and engaged in more mean instances of criminal behavior at intake. No association was found between supervision status of LHFP participants and engaging in criminal behavior at intake, and no difference was observed between participants who were and were not subject to

community supervision with respect to average instances of criminal behavior reported at intake.

Research Question Two

Pearson chi-square tests of independence and Welch *t*-tests were performed to answer the second primary research question:

> 2. *Do LHFP participants with past criminal justice involvement differ from those without past criminal justice involvement at specific intervals of program exposure?*

All assumptions for the use of the chi-square test of independence were met, unless stated otherwise (i.e., Fisher's exact tests were used for crosstabulation analyses with fewer than five expected counts), and rank transformations were applied in cases where the dependent variable did not meet assumptions of the Welch *t*-test. *Initial CJI* was measured categorically (no = 0, yes = 1) in these analyses and indicates whether or not participants reported any of the four individual criminal justice involvement measures at intake. These individual criminal justice involvement measures (*arrest*, *incarceration*, *awaiting trial or sentencing*, and *supervision status*) were also used in these analyses and were measured categorically (no = 0, yes = 1). The remaining measures of comparison included participant demographics, mental health conditions, risky behavior, and housing outcomes.

Do Participants with CJI Differ on Mental Health at Specific Intervals of LHFP?

Chi-square tests of independence were performed in order to ascertain whether or not past criminal justice involvement among LHFP participants is associated with experiencing mental health conditions at specific intervals of program exposure (i.e., at six, 12, 18, and 24 months). Welch *t*-tests were also conducted to determine whether or

not participants with past criminal justice involvement differ from those without past criminal justice involvement with respect to mean number of days of reported mental health conditions at six, 12, 18, or 24 months. At six months, no associations were found between past criminal justice involvement of LHFP participants and any of the mental health condition measures, and no differences were observed between participants with and without past criminal justice involvement with respect to mean days of any and all mental health conditions reported at six months.

At 12 months, participants who reported initial CJI or incarceration reported more mean days of any mental health condition compared to their counterparts. Serious depression was more likely among participants with initial CJI, and more mean days of serious depression were reported at 12 months by those with initial CJI and those awaiting trial or sentencing at intake. Participants with initial CJI and, in particular, those subject to community supervision were more likely to report serious anxiety at 12 months. Those who reported initial CJI, arrest, incarceration, or awaiting trial or sentencing reported experiencing more days of serious anxiety, on average, at 12 months compared to their counterparts. Hallucinations were more likely to be reported at 12 months among participants who were arrested prior to or awaiting trial or sentencing at intake. No associations were found between past criminal justice involvement of any type and experiencing impaired brain function at 12 months, and no differences were observed between participants with and without any type of past criminal justice involvement with respect to average number of days of impaired brain function reported at 12 months.

At 18 months, no associations were found between past criminal justice involvement of LHFP participants and any of the measures of mental health. Likewise,

no differences were observed between participants with and without any type of past criminal justice involvement with respect to mean days of any and all mental health conditions reported at 18 months. At 24 months, participants subject to probation or parole supervision at intake reported experiencing *fewer* mean days of any mental health condition and, in particular, serious depression and impaired brain function. No associations were found, however, between past criminal justice involvement of LHFP participants and experiencing serious anxiety or hallucinations at 24 months, and no differences were observed between participants with and without any type of past criminal justice involvement with respect to average number of days of serious anxiety or hallucinations reported at 24 months.

Past CJI and Any Mental Health

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to any mental health condition at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

Results are presented below and summarized in Table 20.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and experiencing any mental health condition at six, 12, 18, or 24 months. *Any mental health* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported experiencing serious depression, serious anxiety, hallucinations, or impaired brain function in the past 30 days. For each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or

not x participants experiencing any mental health condition or not). Overall, initial CJI of LHFP participants was not associated with experiencing any mental health condition at six, 12, 18, or 24 months, nor were any of the individual past criminal justice involvement measures (see Table 20).

Welch *t*-test. Welch *t*-tests were also performed, for which *any mental health days* was measured continuously (range 0 – 30) and represents the average number of days of serious depression, serious anxiety, hallucinations, and impaired brain function reported over the past 30 days (e.g., a value of 30 indicates 30 days each of depression, anxiety, hallucinations, and impaired brain function). No statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to mean number of days of any mental health condition reported at six months (see Table 20).

At 12 months, however, participants with initial CJI reported experiencing some type of mental health condition on an average of 8.5 days (SD = 8.1), while those without initial CJI reported an average of 6.1 days (SD = 7.4), a statistically significant difference, t (101) = 2.1, p = .04. Participants who were incarcerated in the 30 days prior to intake reported experiencing significantly more days, on average, of some type of mental health condition at 12 months (M = 9.9, SD = 8.3) compared to their counterparts (M = 6.4, SD = 7.5), t (29) = 2.0, p = .05. Additional Welch *t*-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 12 months (see Table 20).

Table 20.

Past criminal justice involvement and any mental health condition at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	***φ***	***p***
6 mo.	Initial CJI	89	6.9	7.3	242	7.4	7.9	-0.5	170	.59	1.0	.06	.31
	Arrest	44	6.6	7.2	289	7.3	7.8	-0.6	60	.55	0.4	.03	.55
	Incarceration	41	6.7	7.4	292	7.3	7.8	-0.5	53	.62	0.1	.02	.74
	Awaiting	36	7.8	8.4	297	7.2	7.7	0.5	42	.65	1.2	.06	.27
	Supervision	38	7.3	7.0	293	7.2	7.8	0.1	50	.93	1.6	.07	.20
12 mo.	Initial CJI	63	8.5	8.1	181	6.1	7.4	2.1	101	.04	1.8	.09	.18
	Arrest	27	9.3	8.2	218	6.4	7.5	1.7	32	.10	1.8	.09	.18
	Incarceration	25	9.9	8.3	220	6.4	7.5	2.0	29	.05	1.3	.07	.26
	Awaiting	28	9.7	8.7	217	6.3	7.4	2.0	32	.06	2.0	.09	.15
	Supervision	30	8.0	7.9	214	6.5	7.6	0.9	37	.37	1.4	.08	.24
18 mo.	Initial CJI	43	7.9	7.1	133	7.1	7.8	0.6	77	.55	0.9	.07	.35
	Arrest	20	8.5	7.3	157	7.2	7.7	0.8	25	.46	0.9		.41
	Incarceration	18	7.3	6.6	159	7.3	7.8	<.01	23	1.0	0.6		.57
	Awaiting	17	8.5	7.3	160	7.2	7.7	0.7	20	.49	0.4		.77
	Supervision	20	6.7	6.8	156	7.4	7.8	-0.4	26	.68	0.2		.79
24 mo.	Initial CJI	30	6.8	7.8	99	6.5	8.1	0.1	50	.89	0.1	.03	.70
	Arrest	17	6.9	7.0	113	6.5	8.2	0.2	23	.85	0.4	.06	.53
	Incarceration	15	6.2	7.0	115	6.6	8.1	-0.2	19	.84	0.1		1.0
	Awaiting	12	10.1	9.4	118	6.2	7.8	1.4	13	.18	0.2		1.0
	Supervision	11	2.9	3.9	118	6.9	8.2	-2.9	19	.01	0.3		.73

Note: When expected count < 5, Fisher's exact test used, *φ* omitted.

Likewise, no statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average days of any mental health condition reported at 18 months. At 24 months, no statistically significant differences were found between participants with and without initial CJI, but those who were subject to probation or parole supervision at intake reported significantly fewer days of any mental health condition, on average ($M = 2.9$, $SD = 3.9$), compared to those who were not ($M = 6.9$, $SD = 8.2$), $t\ (19) = -2.9$, $p = .01$. Additional Welch *t*-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 24 months (see Table 20).

Summary. No associations were found between past criminal justice involvement (of any type) and experiencing any mental health condition at six months. Likewise, no differences were observed at six months between participants with and without past criminal justice involvement with respect to average days of any mental health condition reported; therefore, the null hypothesis was not rejected at six months. At 12 months, participants with initial CJI and, in particular, those who were incarcerated in the 30 days prior to intake reported more mean days of any mental health condition compared to their counterparts. Thus, the null hypothesis was rejected at 12 months. No associations were found between past criminal justice involvement of LHFP participants and experiencing any mental health condition at 18 months, and no differences were observed between participants with and without past criminal justice involvement with respect to average days of any mental health condition reported at 18 months. Thus, the null hypothesis was not rejected at 18 months. At 24 months, participants subject to probation or parole supervision reported fewer days of any mental health condition, on average, compared to their counterparts, and therefore, the null hypothesis was rejected.

Past CJI and Depression

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to depression at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

Results are presented below and summarized in Table 21.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and

experiencing serious depression at six, 12, 18, or 24 months. *Depression* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants experiencing serious depression or not). Overall, initial CJI of LHFP participants was not associated with experiencing serious depression at six months, nor were any of the individual past criminal justice involvement measures (see Table 21), but one moderately weak but statistically significant association was found between experiencing serious depression at 12 months and initial CJI. Two-thirds (66.7%) of participants with initial CJI reported experiencing serious depression compared to one-half (50.8%) of those without initial CJI, χ^2 (1, N = 242) = 4.7, φ = .14, p = .03. Additional chi-square tests of independence conducted using the individual past criminal justice involvement measures were not significant at 12 months. Likewise, initial CJI of LHFP participants was not associated with experiencing serious depression at 18 or 24 months, nor were any of the individual past criminal justice involvement measures.

Welch *t*-test. Welch *t*-tests were also performed, for which *depression days* was measured continuously (range 0 – 30). At six months, no statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average days of reported depression (see Table 21). However, at 12 months, participants with initial CJI reported experiencing serious depression on an average of 10.6 days (SD = 11.2), while those without initial CJI reported seven days (SD = 10.4), a statistically significant difference, t (102) = 2.2, p = .03. Participants who were awaiting trial or sentencing at intake reported experiencing significantly more mean days of serious depression at 12 months (M = 13.1, SD = 12.6)

Table 21.

Past criminal justice involvement and serious depression at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	***φ***	***p***
6 mo.	Initial CJI	89	8.1	10.3	242	8.8	11.6	-0.5	174	.59	0.8	.05	.38
	Arrest	44	6.8	9.1	289	8.8	11.5	-1.3	66	.19	1.3	.06	.26
	Incarceration	41	7.0	9.3	292	8.8	11.5	-1.1	59	.27	1.2	.06	.27
	Awaiting	36	8.5	11.1	297	8.6	11.3	-0.1	44	.96	0.7	.05	.41
	Supervision	38	10.4	11.9	293	8.4	11.2	1.0	46	.32	0.2	.02	.68
12 mo.	Initial CJI	63	10.6	11.2	179	7.0	10.4	2.2	102	.03	4.7	.14	.03
	Arrest	27	11.0	11.3	216	7.5	10.6	1.5	32	.13	3.0	.11	.08
	Incarceration	25	12.2	11.6	218	7.4	10.5	2.0	29	.06	2.0	.09	.16
	Awaiting	28	13.1	12.6	215	7.2	10.3	2.4	32	.02	2.2	.10	.14
	Supervision	30	10.2	11.3	212	7.6	10.6	1.2	37	.25	1.0	.06	.33
18 mo.	Initial CJI	43	10.5	12.0	132	8.1	10.9	1.2	66	.25	1.7	.10	.19
	Arrest	20	10.4	12.3	156	8.4	11.1	0.7	23	.50	0.3	.04	.57
	Incarceration	18	9.4	12.0	158	8.5	11.1	0.3	20	.77	0.03	.01	.85
	Awaiting	17	13.7	13.2	159	8.1	10.9	1.7	18	.11	2.4	.12	.13
	Supervision	20	10.1	11.8	155	8.5	11.2	0.6	24	.57	1.2	.08	.28
24 mo.	Initial CJI	30	8.7	11.5	99	7.5	10.3	0.5	44	.62	0.3	.05	.60
	Arrest	17	9.9	12.3	113	7.4	10.3	0.8	20	.43	0.7	.07	.41
	Incarceration	15	10.7	12.8	115	7.3	10.2	1.0	16	.35	0.9	.08	.35
	Awaiting	12	12.4	13.8	118	7.2	10.1	1.3	12	.23	0.05	.02	.83
	Supervision	11	2.1	3.2	118	8.3	10.8	-4.5	40	<.01	0.5		.54

Note: When expected count < 5, Fisher's exact test used, *φ* omitted.

compared to their counterparts ($M = 7.2$, $SD = 10.3$), $t\ (32) = 2.4$, $p = .02$. Additional Welch *t*-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 12 months.

Likewise, no statistically significant differences were found at 18 months between participants with and without any type of past criminal justice involvement with respect to mean days of serious depression (see Table 21). At 24 months, no statistically significant differences were found between participants with and without initial CJI, but those who were subject to probation or parole supervision at intake reported experiencing significantly *fewer* mean days of serious depression at 24 months ($M = 2.1$, $SD = 3.2$) compared to their counterparts ($M = 8.3$, $SD = 10.8$), $t\ (40) = -4.5$, $p < .01$. Additional

Welch *t*-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 24 months.

Summary. At six months, no associations were found between past criminal justice involvement of LHFP participants and experiencing serious depression at six months. Likewise, no differences were observed between participants with and without past criminal justice involvement with respect to mean days of reported serious depression, and thus the null hypothesis was not rejected at six months. At 12 months, participants with initial CJI were more likely to report and experienced more average days of serious depression compared to those without initial CJI. Those who were awaiting trial or sentencing at intake reported experiencing more days of serious depression, on average, at 12 months compared to their counterparts. Thus, the null hypothesis was rejected at 12 months. No associations were found between past criminal justice involvement of LHFP participants and experiencing serious depression at 18 months, and no differences were observed between those with and without past criminal justice involvement with respect to average days of serious depression reported; therefore, the null hypothesis was not rejected at 18 months. At 24 months, participants subject to probation or parole supervision at intake reported fewer mean days of depression compared to their counterparts. Thus, the null hypothesis was rejected at 24 months.

Past CJI and Anxiety

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

H_0 = No difference is observed with respect to anxiety at six, 12, 18, or 24 months between participants with and without past criminal justice involvement

Results are presented below and summarized in Table 22.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and experiencing serious anxiety at six, 12, 18, or 24 months. *Anxiety* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants experiencing serious anxiety or not). Overall, initial CJI of LHFP participants was not associated with experiencing serious anxiety at six months, nor were any of the individual past criminal justice involvement measures (see Table 22), but two moderately weak but statistically significant associations were found between both initial CJI and supervision status and experiencing anxiety at 12 months. Nearly three-fourths (71.4%) of participants with initial CJI reported experiencing serious anxiety at 12 months compared to 55% of those without initial CJI, χ^2 (1, N = 243) = 5.2, φ = .15, p = .02. Likewise, 80% of those on probation or parole at intake reported serious anxiety at 12 months compared to just over one-half (56.3%) of those who were not, χ^2 (1, N = 243) = 6.1, φ = .16, p = .01. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant at 12 months. Likewise, initial CJI was not associated with experiencing serious anxiety at 18 or 24 months, nor were any of the individual past criminal justice involvement measures.

Welch *t*-test. Welch *t*-tests were also performed, for which *anxiety days* was measured continuously (range 0 – 30). No statistically significant differences were found

between participants with and without any type of past criminal justice involvement with respect to average number of days of serious anxiety reported at six months (see Table 22). At 12 months, however, participants with initial CJI reported experiencing serious anxiety on an average of 11.9 days (*SD* = 12.0), while those without initial CJI reported 8.3 days (*SD* = 11.3), a statistically significant difference, t (103) = 2.1, p = .04. Those who were arrested in the 30 days prior to intake reported significantly more mean days of serious anxiety at 12 months (*M* = 13.7, *SD* = 12.5) compared to their counterparts (*M* = 8.6, *SD* = 11.4), t (32) = 2.0, p = .05. Participants who were incarcerated prior to intake reported an average of 14.4 days of serious anxiety at 12 months (*SD* = 12.9), while those who were not reported 8.9 days (*SD* = 11.3), t (28) = 2.1, p = .04. Those who were awaiting trial or sentencing at intake reported experiencing significantly more days of serious anxiety, on average (*M* = 13.9, *SD* = 12.3), compared to those who were not (*M* = 8.6, *SD* = 11.4), t (33) = 2.2, p = .04. An additional Welch *t*-test conducted using the remaining individual past criminal justice involvement measure was not significant at 12 months. Likewise, no statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average number of days of serious anxiety reported at 18 or 24 months.

Summary. No associations were found between past criminal justice involvement of LHFP participants and experiencing serious anxiety at six months. Likewise, no differences were observed between participants with and without past criminal justice involvement with respect to mean days of serious anxiety reported, and therefore the null hypothesis was not rejected at six months. At 12 months, participants with initial CJI and, in particular, those on probation or parole at intake were more likely to report

Table 22.

Past criminal justice involvement and serious anxiety at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	***φ***	***p***
6 mo.	Initial CJI	89	9.1	11.4	242	10.0	12.4	-0.6	169	.54	0.1	.02	.77
	Arrest	44	9.9	12.1	289	9.8	12.1	0.1	57	.96	0.4	.03	.55
	Incarceration	41	10.0	12.4	292	9.8	12.1	0.1	51	.93	0.05	.01	.83
	Awaiting	36	9.6	12.2	297	9.9	12.1	-0.1	44	.92	0.1	.02	.79
	Supervision	38	9.1	10.6	293	9.9	12.3	-0.4	51	.67	0.3	.03	.58
12 mo.	Initial CJI	63	11.9	12.0	180	8.3	11.3	2.1	103	.04	5.2	.15	.02
	Arrest	27	13.7	12.5	217	8.6	11.4	2.0	32	.05	2.7	.11	.10
	Incarceration	25	14.4	12.9	219	8.9	11.3	2.1	28	.04	3.2	.11	.08
	Awaiting	28	13.9	12.3	216	8.6	11.4	2.2	33	.04	3.2	.11	.07
	Supervision	30	10.6	10.9	213	9.0	11.7	0.7	39	.46	6.1	.16	.01
18 mo.	Initial CJI	43	10.4	11.9	133	8.8	11.8	0.8	70	.44	2.7	.12	.10
	Arrest	20	9.4	12.2	157	9.3	11.9	0.03	24	.98	0.3	.04	.58
	Incarceration	18	9.3	12.4	159	9.3	11.8	<.01	21	1.0	0.4	.05	.50
	Awaiting	17	13.1	13.4	160	8.9	11.7	1.2	19	.23	2.3	.11	.13
	Supervision	20	9.6	11.1	156	9.2	11.9	0.1	25	.89	1.1	.08	.29
24 mo.	Initial CJI	30	10.7	12.6	99	8.4	11.3	0.9	44	.38	0.01	.01	.92
	Arrest	17	10.6	12.8	113	8.6	11.4	0.6	20	.55	0.05	-.02	.83
	Incarceration	15	8.7	12.2	115	8.9	11.5	-0.1	17	.95	0.5	-.06	.47
	Awaiting	12	14.9	14.0	118	8.3	11.2	1.6	12	.14	0.7	.07	.41
	Supervision	11	6.1	10.8	118	9.2	11.6	-0.9	12	.38	0.5		.54

Note: When expected count < 5, Fisher's exact test used, *φ* omitted.

experiencing serious anxiety. Likewise, those with initial CJI and, in particular, those who were arrested, incarcerated, or awaiting trial or sentencing at intake reported experiencing more days of serious anxiety, on average, at 12 months compared to their counterparts. Thus, the null hypothesis was rejected at 12 months. No associations were found between criminal justice involvement of LHFP participants and experiencing serious anxiety at 18 or 24 months. Likewise, no differences were observed between participants with and without past criminal justice involvement with respect to mean days of serious anxiety reported; therefore, the null hypothesis was not rejected at 18 or 24 months.

Past CJI and Hallucinations

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to hallucinations at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

Results are presented below and summarized in Table 23.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and experiencing hallucinations at six, 12, 18, or 24 months. *Hallucinations* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants experiencing hallucinations or not). Overall, initial CJI of LHFP participants was not associated with experiencing hallucinations at six months, nor were any of the individual past criminal justice involvement measures (see Table 23).

Likewise, initial CJI was not associated with experiencing hallucinations at 12 months, but two statistically significant associations were found between both arrest and awaiting trial or sentencing at intake and experiencing hallucinations at 12 months. As each test produced one expected count below five, Fisher's exact tests were conducted (Campbell, 2007; Cochran, 1954). Of participants who were arrested in the 30 days prior to intake, 22.2% reported hallucinations at 12 months compared to 8.3% of those who did not report arrest at intake, χ^2 (1, N = 243) = 5.2, p = .04. In addition, 21.4% of those awaiting trial or sentencing at intake reported hallucinations at 12 months compared to 8.4% among their counterparts, χ^2 (1, N = 243) = 4.7, p = .04. Additional Fisher's exact tests conducted using the remaining individual criminal justice involvement measures

Table 23.

Past criminal justice involvement and hallucinations at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	***φ***	***p***
6 months	Initial CJI	89	171.6 (1.8)	65.7 (5.6)	243	166.2 (1.6)	61.4 (5.4)	0.7	148	.51	0.6	.04	.45
	Arrest	44	169.8 (1.6)	64.3 (5.2)	290	167.1 (1.7)	62.2 (5.5)	0.3	56	.80	0.1	.02	.74
	Incarceration	41	168.3 (1.7)	63.5 (5.4)	293	167.4 (1.7)	62.3 (5.5)	0.1	51	.93	0.01	.01	.91
	Awaiting	36	183.1 (3.5)	76.1 (8.1)	298	165.6 (1.5)	60.4 (5.0)	1.3	40	.19	2.1	.08	.14
	Supervision	38	165.2 (1.2)	59.3 (5.0)	294	168.0 (1.8)	63.0 (5.5)	-0.3	48	.78	0.02	-.01	.89
12 months	Initial CJI	63	129.4 (2.5)	45.0 (7.4)	179	119.5 (1.1)	32.7 (5.2)	1.6	86	.11	3.4	.12	.07
	Arrest	27	136.4 (2.4)	50.5 (6.9)	216	120.2 (1.4)	33.9 (5.7)	1.6	29	.12	5.2		.04
	Incarceration	25	133.8 (2.2)	48.7 (7.0)	218	120.6 (1.4)	34.6 (5.7)	1.3	27	.20	3.2		.08
	Awaiting	28	136.3 (3.9)	51.4 (9.6)	215	120.1 (1.2)	33.7 (5.1)	1.6	30	.12	4.7		.04
	Supervision	30	118.5 (1.7)	32.2 (6.5)	212	122.6 (1.5)	37.1 (5.8)	-0.6	41	.53	0.4		.75
18 months	Initial CJI	43	87.4 (1.3)	29.9 (4.8)	132	89.0 (2.3)	32.1 (7.1)	-0.3	76	.77	0.04	-.02	.85
	Arrest	20	88.2 (1.8)	31.2 (6.7)	156	88.5 (2.0)	31.6 (6.6)	-0.05	24	.96	<.01		1.0
	Incarceration	18	79.8 (0.1)	18.3 (0.5)	158	89.5 (2.2)	32.5 (6.9)	-1.9	31	.06	1.4		.48
	Awaiting	17	89.8 (0.7)	31.9 (1.5)	159	88.4 (2.1)	31.5 (6.9)	0.2	19	.86	0.1		.72
	Supervision	20	80.0 (0.5)	20.2 (2.2)	155	89.7 (2.2)	32.6 (7.0)	-1.8	33	.07	1.7		.32
24 months	Initial CJI	30	71.0 (1.7)	26.6 (5.6)	99	64.0 (2.0)	21.2 (6.8)	1.3	41	.20	2.9		.13
	Arrest	17	70.6 (0.8)	26.3 (2.0)	113	64.7 (2.0)	22.0 (7.0)	0.9	20	.39	1.5		.25
	Incarceration	15	68.2 (0.4)	24.3 (0.9)	115	65.1 (2.1)	22.5 (6.9)	0.5	17	.65	0.5		.44
	Awaiting	12	72.8 (3.2)	29.5 (8.6)	118	64.8 (1.8)	21.8 (6.3)	0.9	12	.38	1.4		.37
	Supervision	11	61.7 (0.1)	17.2 (0.3)	118	65.9 (2.1)	23.2 (6.8)	-0.8	14	.46	0.2		1.0

Note: When expected count < 5, Fisher's exact test used, *φ* omitted. Untransformed (unranked) means and standard deviations shown in parentheses.

were not significant at 12 months (see Table 23). Likewise, initial CJI of LHFP participants was not associated with experiencing hallucinations at 18 or 24 months, nor were any of the individual past criminal justice involvement measures.

Welch *t*-test. Welch *t*-tests were also performed, for which *hallucination days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text, and both transformed and untransformed values can be found in Table 23.) No statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to mean days of hallucinations reported at six, 12, 18, or 24 months.

Summary. No associations were found between past criminal justice involvement of LHFP participants and experiencing hallucinations at six months. Likewise, no differences were observed between participants with and without past criminal justice involvement with respect to average days of hallucinations, and therefore the null hypothesis was not rejected at six months. At 12 months, participants who were arrested or awaiting trial or sentencing in the 30 days prior to intake were more likely to report hallucinations compared to their counterparts. Therefore, the null hypothesis was rejected at 12 months. No associations were found between past criminal justice involvement of LHFP participants and experiencing hallucinations at 18 or 24 months. Likewise, no differences were observed between participants with and without past criminal justice involvement with respect to average days of hallucinations reported, and therefore the null hypothesis was not rejected at 18 or 24 months.

Past CJI and Impaired Brain Function

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to impaired brain function at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

Results are presented below and summarized in Table 24.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and experiencing impaired brain function at six, 12, 18, or 24 months. *Impaired brain function* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants experiencing impaired brain function or not). Overall, initial CJI of LHFP participants was not associated with experiencing impaired brain function at six, 12, 18, or 24 months, nor were any of the individual past criminal justice involvement measures (see Table 24).

Welch *t*-test. Welch *t*-tests were also performed, for which *impaired brain function days* was measured continuously (range 0 – 30). No statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to mean days of impaired brain function reported at six, 12, or 18 months (see Table 24). Likewise, no statistically significant differences were found between participants with and without initial CJI at 24 months, but those who were subject to probation or parole supervision at intake reported experiencing significantly fewer days of impaired brain function, on average, at 24 months (M = 3.5, SD = 5.6) compared to their counterparts (M = 8.2, SD = 12.2), t (20) = -2.3, p = .03. Additional

Table 24.

Past criminal justice involvement and impaired brain function at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	φ	***p***
6 mo.	Initial CJI	89	8.4	11.3	243	8.9	11.8	-0.4	163	.71	0.03	-.01	.87
	Arrest	44	8.2	11.1	290	8.9	11.8	-0.4	59	.69	0.1	.02	.76
	Incarceration	41	8.1	10.8	293	8.9	11.8	-0.4	54	.66	0.3	.03	.61
	Awaiting	36	9.7	12.9	298	8.7	11.5	0.4	42	.66	0.4	-.04	.51
	Supervision	38	8.6	11.1	294	8.8	11.7	-0.1	48	.93	<.01	<.01	.98
12 mo.	Initial CJI	63	9.2	12.0	180	8.1	11.7	0.6	105	.54	0.4	.04	.53
	Arrest	27	9.9	12.6	217	8.3	11.7	0.6	32	.54	1.2	.07	.27
	Incarceration	25	10.7	12.8	219	8.2	11.7	0.9	29	.37	2.4	.10	.12
	Awaiting	28	7.9	10.8	216	8.6	11.9	-0.3	36	.76	0.8	.06	.37
	Supervision	30	9.3	11.9	213	8.3	11.7	0.5	37	.65	0.8	.06	.37
18 mo.	Initial CJI	43	9.4	12.6	133	9.4	12.1	-0.01	69	.99	0.1	-.02	.79
	Arrest	20	12.5	13.9	157	9.1	11.9	1.0	23	.31	0.8	.07	.39
	Incarceration	18	10.5	13.3	159	9.4	12.1	0.4	20	.73	0.2	.03	.67
	Awaiting	17	6.7	10.3	160	9.8	12.3	-1.2	21	.26	0.03	.01	.86
	Supervision	20	6.7	11.5	156	9.8	12.2	-1.1	25	.28	2.2	-.11	.14
24 mo.	Initial CJI	30	6.1	9.8	99	8.3	12.4	-1.0	60	.32	0.01	-.01	.92
	Arrest	17	6.2	10.4	113	8.0	12.1	-0.7	23	.52	0.1	-.02	.81
	Incarceration	15	5.0	8.8	115	8.1	12.2	-1.2	22	.24	0.1	-.03	.75
	Awaiting	12	10.1	11.6	118	7.5	11.9	0.7	13	.48	1.1	.09	.29
	Supervision	11	3.5	5.6	118	8.2	12.2	-2.3	20	.03	0.01		1.0

Note: When expected count < 5, Fisher's exact test used, φ omitted.

Welch *t*-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 24 months.

Summary. No associations were found between past criminal justice involvement of LHFP participants and experiencing impaired brain function at six, 12, 18, or 24 months, and no differences were observed between participants with and without past criminal justice involvement with respect to average days of impaired brain function reported at six, 12, or 18 months. Thus, the null hypothesis was not rejected at six, 12, or 18 months. At 24 months, participants subject to probation or parole supervision at intake reported fewer mean days of impaired brain function compared to their counterparts; therefore, the null hypothesis was rejected.

Do Participants with CJI Differ on Risky Behavior at Specific Intervals of LHFP?

Chi-square tests of independence were performed to ascertain whether or not past criminal justice involvement among LHFP participants is associated with engaging in risky behavior at specific intervals of program exposure (i.e., at six, 12, 18, and 24 months). Welch *t*-tests were also conducted to determine whether or not participants with past criminal justice involvement differ from those without past criminal justice involvement with respect to average risky behavior scores, average days of trouble controlling violent behavior, alcohol use, and illegal drug use, and average instances of criminal behavior reported in the past 30 days at six, 12, 18, or 24 months. Participants with initial CJI and, in particular, those who were arrested or incarcerated prior to intake were more likely to engage in some type of risky behavior at six months compared to their counterparts. Those with initial CJI and, in particular, participants who were arrested, incarcerated, or awaiting trial or sentencing in the 30 days prior to intake had higher average risky behavior scores at six months. Trouble controlling violent behavior at six months was more likely and reported on more days, on average, among those arrested or incarcerated in the 30 days prior to intake. Participants with initial CJI and, in particular, those who were arrested, incarcerated, or awaiting trial or sentencing in the 30 days prior to intake were more likely to report and engaged in more average days of alcohol use at six months compared to their counterparts. Illegal drug use was more likely and reported on more days, on average, among those with initial CJI compared to those without initial CJI at six months. Participants who were arrested or awaiting trial or sentencing prior to intake were more likely to report using illegal drugs at six months compared to their counterparts. No associations were found between past criminal justice

involvement of LHFP participants and engaging in criminal behavior, and no differences were observed between participants with and without past criminal justice involvement with respect to average instances of criminal behavior reported at six months.

At 12 months, participants with initial CJI were more likely to report some type of risky behavior and had higher average risky behavior scores compared to those without initial CJI. Those who were arrested or incarcerated in the 30 days prior to intake were more likely to report and experienced more days of trouble controlling violent behavior, on average, at 12 months compared to their counterparts. On average, more days of alcohol use were reported at 12 months among those with initial CJI and those who were awaiting trial or sentencing at intake compared to their counterparts. Criminal behavior was more likely to be reported by participants with initial CJI and, in particular, those who were incarcerated or awaiting trial or sentencing in the 30 days prior to intake. No associations were found between past criminal justice involvement of LHFP participants and illegal drug use, and no differences were observed between participants with and without past criminal justice involvement with respect to mean days of illegal drug use reported at 12 months.

At 18 months, no associations were found between past criminal justice involvement of LHFP participants and reporting any risky behavior, trouble controlling violent behavior, illegal drug use, or criminal behavior, and no differences were observed between those with and without past criminal justice involvement with respect to average risky behavior scores or mean days of trouble controlling violent behavior, illegal drug use, or criminal behavior reported at 18 months. However, participants with initial CJI and, in particular, those who were arrested prior to intake were more likely to report

alcohol use at 18 months compared to their counterparts. Those with initial CJI and, in particular, participants who reported arrest or incarceration at intake reported engaging in more mean days of alcohol use at 18 months. At 24 months, no associations were found between past criminal justice involvement of LHFP participants and reporting any risky behavior, alcohol use, illegal drug use, or criminal behavior. Likewise, no differences were observed between those with and without past criminal justice involvement with respect to average risky behavior scores or mean days of alcohol use, illegal drug use, or trouble controlling violent behavior reported at 24 months. However, those subject to probation or parole supervision at intake reported *fewer* mean days of trouble controlling violent behavior at 24 months compared to their counterparts.

Past CJI and Any Risky Behavior

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to any risky behavior at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

Results are presented below and summarized in Table 25.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and engagement in risky behavior at six, 12, 18, or 24 months. *Any risky behavior* was measured categorically (no = 0, yes = 1) and indicates whether or not a participant reported trouble controlling violent behavior, alcohol use, illegal drug use, or criminal behavior in the past 30 days. For each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x

participants reporting any risky behavior or not). Of participants with initial CJI, 78.7% reported some type of risky behavior at six months compared to 62.4% of those without initial CJI, χ^2 (1, N = 331) = 7.7, φ =.15, p = .01. Specifically, 90.9% of those who were arrested in the 30 days prior to intake reported some type of risky behavior at six months compared to 63.3% of their counterparts, χ^2 (1, N = 333) = 13.1, φ = .20, p < .01. Likewise, 90.2% of participants who reported incarceration at intake engaged in some type of risky behavior at six months compared to 63.7% of those who did not, χ^2 (1, N = 333) = 11.5, φ = .19, p < .01. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant at six months (see Table 25).

At 12 months, 79.4% of participants with initial CJI reported engaging in some type of risky behavior compared to 66.3% of those without initial CJI, χ^2 (1, N = 244) = 3.8, φ = .12, p = .05. Additional chi-square tests of independence conducted using the individual past criminal justice involvement measures were not statistically significant at 12 months. Likewise, initial CJI of LHFP participants was not associated with engaging in any risky behavior at 18 or 24 months, nor were any of the individual past criminal justice involvement measures.

Welch *t*-test. Welch *t*-tests were also performed, for which any risky behavior was measured continuously using the *risky behavior scale* (range 0 – 4), which indicates a participant's level of engagement in the four measures of risky behavior (e.g., a value of four indicates the highest level—trouble controlling violent behavior, alcohol use, illegal drug use, and criminal behavior in the past 30 days). At six months, participants with initial CJI scored significantly higher on the risky behavior scale (M = 1.4, SD = 1.1)

Table 25.

Past criminal justice involvement and any risky behavior at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	***φ***	***p***
6 mo.	Initial CJI	89	1.4	1.1	242	1.0	1.0	3.2	145	<.01	7.7	.15	.01
	Arrest	44	1.6	1.0	289	1.0	1.0	3.8	56	<.01	13.1	.20	<.01
	Incarceration	41	1.7	1.1	292	1.0	1.0	3.7	51	<.01	11.5	.19	<.01
	Awaiting	36	1.5	1.2	297	1.0	1.0	2.3	41	.03	3.4	.10	.07
	Supervision	38	1.2	1.1	293	1.1	1.0	1.0	47	.35	0.3	.03	.56
12 mo.	Initial CJI	63	1.4	1.2	181	1.1	1.1	2.2	101	.03	3.8	.12	.05
	Arrest	27	1.6	1.3	218	1.1	1.1	1.9	31	.07	2.0	.09	.16
	Incarceration	25	1.6	1.3	220	1.1	1.1	1.9	28	.07	1.4	.08	.24
	Awaiting	28	1.6	1.3	217	1.1	1.1	1.7	32	.09	1.2	.07	.28
	Supervision	30	1.3	1.1	214	1.1	1.1	0.9	38	.35	1.7	.08	.19
18 mo.	Initial CJI	43	1.2	0.9	133	0.9	1.0	1.6	77	.11	3.0	.13	.09
	Arrest	20	1.3	0.7	157	1.0	1.0	1.7	29	.10	3.6	.14	.06
	Incarceration	18	1.2	0.7	159	1.0	1.0	1.4	24	.17	2.7	.12	.10
	Awaiting	17	1.2	0.9	160	1.0	1.0	0.9	20	.36	0.9	.07	.34
	Supervision	20	0.9	1.0	156	1.0	0.9	-0.4	24	.73	0.4	-.05	.55
24 mo.	Initial CJI	30	1.2	1.0	99	1.0	0.9	1.0	45	.31	0.3	.05	.56
	Arrest	17	1.2	0.9	113	1.0	0.9	1.0	22	.31	1.6	.11	.21
	Incarceration	15	1.3	0.9	115	1.0	0.9	1.4	18	.18	2.4		.15
	Awaiting	12	1.4	1.2	118	1.0	0.9	1.3	12	.23	0.2		.75
	Supervision	11	0.7	1.0	118	1.0	0.9	-1.0	12	.35	3.1		.09

Note: When expected count < 5, Fisher's exact test used, *φ* omitted.

compared to those without initial CJI ($M = 1.0$, $SD = 1.0$), $t\ (145) = 3.2$, $p < .01$. Participants who reported arrest at intake had an average score of 1.6 at six months ($SD = 1.0$), while their counterparts had an average score of 1.0 ($SD = 1.0$), $t\ (56) = 3.8$, $p < .01$. Those who were incarcerated in the 30 days prior to intake had an average score of 1.7 ($SD = 1.1$), while those who were not scored significantly lower at six months ($M = 1.0$, $SD = 1.0$), $t\ (51) = 3.7$, $p < .01$. Participants who were awaiting trial or sentencing at intake scored significantly higher ($M = 1.5$, $SD = 1.2$) than those who were not ($M = 1.0$, $SD = 1.0$), $t\ (41) = 2.3$, $p = .03$. An additional Welch *t*-test conducted using the remaining individual past criminal justice involvement measure was not significant at six months (see Table 25).

At 12 months, participants with initial CJI scored significantly higher on the risky behavior scale ($M = 1.4$, $SD = 1.2$) than those without initial CJI ($M = 1.1$, $SD = 1.1$), t (101) = 2.2, $p = .03$. Additional Welch t-tests conducted using the individual past criminal justice involvement measures were not significant at 12 months (see Table 25). Likewise, no statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average risky behavior scores at 18 or 24 months.

Summary. At six months, participants with initial CJI and, in particular, those who were arrested or incarcerated in the 30 days prior to intake were more likely to report engaging in some type of risky behavior compared to those who were not. Likewise, participants with initial CJI and, in particular, those who reported arrest, incarceration, or awaiting trial or sentencing at intake had higher mean scores on the risky behavior scale, and therefore the null hypothesis was rejected at six months. At 12 months, participants with initial CJI were more likely to report engaging in risky behavior and had higher mean risky behavior scores compared to those without initial CJI. Thus, the null hypothesis was rejected at 12 months. As no associations were found between past criminal justice involvement and engaging in any risky behavior at 18 or 24 months, and no differences were observed between participants with and without past criminal justice involvement with respect to mean risky behavior scores, the null hypothesis was not rejected at 18 or 24 months.

Past CJI and Violent Behavior

Chi-square tests of independence and Welch t-tests were performed to test the null hypothesis:

H_0 = No difference is observed with respect to trouble controlling violent behavior at six, 12, 18, or 24 months between participants with and without past criminal justice involvement

Results are presented below and summarized in Table 26.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and experiencing trouble controlling violent behavior at six, 12, 18, or 24 months. *Violent behavior* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants experiencing trouble controlling violent behavior or not). Overall, initial CJI of LHFP participants was not associated with trouble controlling violent behavior at six months (see Table 26), but two moderately weak but statistically significant associations were found between both arrest and incarceration at intake and experiencing trouble controlling violent behavior at six months. Of those who were arrested in the 30 days prior to intake, 27.3% reported trouble controlling violent behavior at six months compared to 11.4% of those who were not, χ^2 (1, N = 334) = 8.3, φ = .16, p < .01. Of those incarcerated prior to intake, 29.3% reported trouble controlling violent behavior compared to 11.3% of their counterparts, χ^2 (1, N = 334) = 10.0, φ = .17, p < .01. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant at six months.

At 12 months, initial CJI of LHFP participants was not associated with trouble controlling violent behavior (see Table 26), but two statistically significant associations were found between both arrest and incarceration at intake and experiencing trouble controlling violent behavior at 12 months. As each test produced one expected count below five, Fisher's exact tests were conducted (Campbell, 2007; Cochran, 1954). At 12

months, 30.8% of those arrested in the 30 days prior to intake reported experiencing trouble controlling violent behavior compared to 10% of those who were not, χ^2 (1, N = 245) = 9.3, p = .01. One-third (33.3%) of those incarcerated prior to intake reported trouble controlling violent behavior at 12 months compared to 10% of their counterparts, χ^2 (1, N = 245) = 11.0, p < .01. Additional Fisher's exact tests conducted using the remaining individual past criminal justice involvement measures were not significant at 12 months. Likewise, initial CJI of LHFP participants was not associated with trouble controlling violent behavior at 18 or 24 months, nor were any of the individual past criminal justice involvement measures.

Welch *t*-test. Welch *t*-tests were also performed, for which *violent behavior days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text, and both transformed and untransformed values can be found in Table 26.) At six months, no statistically significant differences were found between participants with and without initial CJI, but those who were arrested in the 30 days prior to intake reported significantly more mean days of trouble controlling violent behavior at six months (M = 190.1, SD = 74.8) compared to those who did not report arrest at intake (M = 164.1, SD = 53.5), t (50) = 2.2, p = .03. Likewise, participants who were incarcerated in the 30 days prior to intake reported experiencing significantly more days of trouble controlling violent behavior, on average, at six months (M = 193.4, SD = 76.5) compared to their counterparts (M = 163.9, SD = 53.3), t (46) = 2.4, p = .02. Additional Welch *t*-tests conducted using the remaining individual past criminal justice involvement measures were not significant at six months.

At 12 months, no statistically significant differences were found between participants with and without initial CJI with respect to trouble controlling violent behavior (see Table 26), but those who reported arrest at intake experienced significantly more mean days of trouble controlling violent behavior (M = 145.4, SD = 57.4) compared to those who did not (M = 120.3, SD = 37.1), t (28) = 2.2, p = .04. Likewise, participants who were incarcerated in the 30 days prior to intake experienced significantly more days of trouble controlling violent behavior, on average, at 12 months (M = 148.5, SD = 58.7) compared to their counterparts (M = 120.2, SD = 37.0), t (25) = 2.3, p = .03. Additional Welch t-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 12 months.

No statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average number of days of trouble controlling violent behavior reported at 18 months. Likewise, no statistically significant differences were found at 24 months between participants with and without initial CJI, but those subject to probation or parole supervision at intake reported fewer mean days of trouble controlling violent behavior (M = 58.5, SD = 0.0) compared to their counterparts (M = 66.2, SD = 21.2), t (117) = -4.0, p < .01. Additional Welch t-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 24 months.

Summary. At six and 12 months, participants who reported arrest or incarceration in the 30 days prior to intake were more likely to report and experienced more mean days of trouble controlling violent behavior. Thus, the null hypothesis was rejected at six and 12 months. As no associations were found between past criminal justice involvement and

trouble controlling violent behavior at 18 months, and no differences were observed between participants with and without past criminal justice involvement with respect to mean days of trouble controlling violent behavior, the null hypothesis was not rejected at 18 months. At 24 months, participants subject to probation or parole supervision reported fewer days of trouble controlling violent behavior, on average, compared to their counterparts, and therefore the null hypothesis was rejected at 24 months.

Past CJI and Alcohol Use

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to alcohol use at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

Results are presented below and summarized in Table 27.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and engaging in alcohol use at six, 12, 18, or 24 months. *Alcohol use* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants reporting alcohol use or not). Of those with initial CJI, 71.9% reported alcohol use at six months compared to 52.7% of those without initial CJI, χ^2 (1, N = 334) = 9.9, φ = .17, $p < .01$. Specifically, 84.1% of participants who were arrested prior to intake reported alcohol use at six months compared to 54.1% of their counterparts, χ^2 (1, N = 336) = 14.1, φ = .21, $p < .01$. Likewise, 82.9% of those who reported incarceration in the 30 days prior to intake reported using alcohol at six months compared to 54.6% of those

who did not, χ^2 (1, N = 336) = 11.9, φ = .19, p < .01. Among those awaiting trial or sentencing at intake, 77.8% reported alcohol use at six months compared to 55.7% of their counterparts, χ^2 (1, N = 336) = 6.5, φ = .14, p = .01. An additional chi-square test of independence conducted using the remaining individual past criminal justice involvement measure was not significant at six months (see Table 27).

At 12 months, initial CJI of LHFP participants was not associated with engaging in alcohol use, nor were any of the individual past criminal justice involvement measures. At 18 months, however, 72.1% of participants with initial CJI reported engaging in alcohol use in the past 30 days compared to 54.1% of those without initial CJI, χ^2 (1, N = 176) = 4.3, φ = .16, p = .04. More specifically, 80% of those who reported arrest at intake reported using alcohol at 18 months compared to 56.1% of their counterparts, χ^2 (1, N = 177) = 4.2, φ = .15, p = .04. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant at 18 months. Likewise, initial CJI of LHFP participants was not associated with engaging in alcohol use at 24 months, nor were any of the individual past criminal justice involvement measures (see Table 27).

Welch *t*-test. Welch *t*-tests were also performed, for which *alcohol use days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text, and both transformed and untransformed values can be found in Table 27.) At six months, participants with initial CJI reported more mean days of alcohol use (M = 197.5, SD = 94.4) compared to those without initial CJI (M = 157.3, SD = 90.9), t (151) = 3.5, p <

Table 26.

Past criminal justice involvement and violent behavior at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	φ	***p***
6 months	Initial CJI	89	174.7 (1.4)	63.9 (5.0)	243	165.1 (1.2)	54.8 (4.8)	1.3	138	.21	2.0	.08	.15
	Arrest	44	190.1 (2.2)	74.8 (6.6)	290	164.1 (1.0)	53.5 (4.5)	2.2	50	.03	8.3	.16	<.01
	Incarceration	41	193.4 (2.4)	76.5 (6.9)	293	163.9 (1.0)	53.3 (4.5)	2.4	46	.02	10.0	.17	<.01
	Awaiting	36	171.4 (0.4)	59.9 (0.9)	298	167.0 (1.3)	57.1 (5.1)	0.4	43	.68	0.4		.60
	Supervision	38	167.7 (1.5)	59.1 (5.5)	294	167.6 (1.2)	57.3 (4.8)	<.01	46	1.0	0.01	-.004	.94
12 months	Initial CJI	62	127.7 (1.4)	45.5 (4.9)	182	120.8 (1.2)	37.6 (5.4)	1.1	91	.28	1.4	.08	.23
	Arrest	26	145.4 (2.6)	57.4 (7.0)	219	120.3 (1.1)	37.1 (5.0)	2.2	28	.04	9.3		.01
	Incarceration	24	148.5 (2.8)	58.7 (7.2)	221	120.2 (1.1)	37.0 (5.0)	2.3	25	.03	11.0		<.01
	Awaiting	28	125.3 (1.3)	43.2 (5.7)	217	122.7 (1.2)	40.1 (5.2)	0.3	33	.77	0.1		.76
	Supervision	30	124.0 (1.2)	41.7 (4.4)	214	122.3 (1.2)	39.6 (5.4)	0.2	37	.83	0.1		.77
18 months	Initial CJI	43	85.9 (0.2)	24.9 (0.8)	133	90.1 (1.7)	30.8 (6.3)	-0.9	87	.36	0.5	-.06	.47
	Arrest	20	90.6 (0.4)	30.8 (1.0)	157	88.8 (1.5)	29.3 (5.8)	0.2	24	.81	0.1		.72
	Incarceration	18	87.1 (0.2)	26.4 (0.5)	159	89.2 (1.5)	29.7 (5.8)	-0.3	22	.75	0.03		1.0
	Awaiting	17	82.9 (0.1)	20.3 (0.5)	160	89.6 (1.5)	30.1 (5.7)	-1.2	24	.23	0.7		.70
	Supervision	20	82.3 (0.2)	19.2 (0.7)	156	89.9 (1.5)	30.4 (5.8)	-1.5	33	.13	1.2		.48
24 months	Initial CJI	89	174.7 (1.4)	63.9 (5.0)	99	65.7 (1.5)	20.5 (6.0)	-0.1	48	.89	0.03		1.0
	Arrest	44	190.1 (2.2)	74.8 (6.6)	113	64.8 (1.3)	19.3 (5.6)	0.8	19	.42	1.0		.39
	Incarceration	41	193.4 (2.4)	76.5 (6.9)	115	64.7 (1.3)	19.2 (5.6)	1.0	16	.35	1.5		.21
	Awaiting	36	171.4 (0.4)	59.9 (0.9)	118	65.1 (1.3)	19.7 (5.5)	0.6	12	.56	0.5		.62
	Supervision	38	167.7 (1.5)	59.1 (5.5)	118	66.2 (1.6)	21.2 (6.1)	-4.0	117	<.01	1.5		.61

Note: When expected count < 5, Fisher's exact test used, φ omitted. Untransformed (unranked) means and standard deviations shown in parentheses.

Table 27.

Past criminal justice involvement and alcohol use at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	***φ***	***p***
6 months	Initial CJI	89	197.5 (8.4)	94.4 (10.1)	245	157.3 (4.9)	90.9 (8.1)	3.5	151	<.01	9.9	.17	<.01
	Arrest	44	216.2 (9.4)	85.1 (10.1)	292	161.3 (5.3)	92.6 (8.5)	3.9	59	<.01	14.1	.21	<.01
	Incarceration	41	217.2 (9.8)	87.1 (10.3)	295	161.7 (5.3)	92.4 (8.4)	3.8	53	<.01	11.9	.19	<.01
	Awaiting	36	209.0 (8.7)	89.2 (9.8)	300	163.6 (5.5)	92.9 (8.6)	2.9	45	.01	6.5	.14	.01
	Supervision	38	175.0 (6.2)	93.3 (8.7)	296	167.1 (5.8)	93.6 (8.8)	0.5	47	.62	0.5	.04	.48
12 months	Initial CJI	63	141.6 (7.7)	68.3 (8.8)	181	116.1 (5.4)	67.9 (8.5)	2.6	108	.01	3.3	.12	.07
	Arrest	27	136.1 (7.0)	67.6 (9.1)	218	121.4 (5.9)	69.0 (8.5)	1.1	33	.29	0.9	.06	.34
	Incarceration	25	135.3 (7.3)	70.3 (9.5)	220	121.6 (5.8)	68.7 (8.5)	0.9	29	.36	0.4	.04	.52
	Awaiting	28	152.2 (9.3)	69.4 (9.7)	217	119.2 (5.6)	68.0 (8.4)	2.4	34	.02	2.3	.10	.13
	Supervision	30	138.2 (6.8)	67.8 (7.4)	214	120.5 (5.8)	68.8 (8.8)	1.3	38	.19	1.0	.06	.33
18 months	Initial CJI	43	103.3 (7.2)	47.9 (8.9)	133	84.1 (5.1)	49.2 (8.5)	2.3	73	.03	4.3	.16	.04
	Arrest	20	111.4 (8.6)	47.1 (9.7)	157	86.1 (5.2)	49.1 (8.4)	2.2	25	.03	4.2	.15	.04
	Incarceration	18	112.4 (8.9)	48.7 (9.7)	159	86.3 (5.2)	48.9 (8.4)	2.2	21	.04	3.0	.13	.08
	Awaiting	17	105.0 (6.2)	44.9 (6.5)	160	87.3 (5.6)	49.6 (8.8)	1.5	20	.14	2.4	.12	.12
	Supervision	20	85.9 (5.1)	48.9 (8.4)	156	89.1 (5.7)	49.6 (8.6)	-0.3	24	.79	0.1	-.03	.73
24 months	Initial CJI	30	72.6 (7.7)	39.4 (10.0)	99	63.0 (4.8)	35.6 (7.9)	1.2	44	.24	0.5	.06	.49
	Arrest	17	80.0 (10.1)	39.3 (11.7)	113	63.3 (4.8)	35.8 (7.7)	1.7	20	.11	1.8	.12	.18
	Incarceration	15	83.8 (11.2)	39.2 (12.0)	115	63.1 (4.7)	35.7 (7.6)	1.9	17	.07	2.4	.14	.12
	Awaiting	12	75.7 (7.0)	36.7 (8.6)	118	64.5 (5.3)	36.5 (8.4)	1.0	13	.33	1.0		.37
	Supervision	11	47.9 (2.0)	33.2 (3.5)	118	66.9 (5.8)	36.6 (8.7)	-1.8	12	.10	3.1		.11

Note: When expected count < 5, Fisher's exact test used, *φ* omitted. Untransformed (unranked) means and standard deviations shown in parentheses.

.01. Those who reported arrest at intake engaged in more mean days of alcohol use at six months (M = 216.2, SD = 85.1) compared to their counterparts (M = 161.3, SD = 92.6), t (59) = 3.9, $p < .01$. Likewise, alcohol use was reported on more days, on average, by participants who were incarcerated prior to intake (M = 217.2, SD = 87.1) compared to those who were not (M = 161.7, SD = 92.4), t (53) = 3.8, $p < .01$. Those awaiting trial or sentencing at intake also reported more mean days of alcohol use at six months (M = 209.0, SD = 89.2) compared to their counterparts (M = 163.6, SD = 92.9), t (45) = 2.9, p = .01. An additional Welch t-test conducted using the remaining individual past criminal justice involvement measure was not significant at six months.

At 12 months, participants with initial CJI reported more days of alcohol use, on average (M = 141.6, SD = 68.3), compared to those without initial CJI (M = 116.1, SD = 67.9), t (108) = 2.6, p = .01. Those awaiting trial or sentencing at intake reported more mean days of alcohol use at 12 months (M = 152.2, SD = 69.4) compared to their counterparts (M = 119.2, SD = 68.0), t (34) = 2.4, p = .02. Additional Welch t-tests conducted using the remaining individual past criminal justice involvement measures were not significant at 12 months.

At 18 months, participants with initial CJI reported more mean days of alcohol use (M = 103.3, SD = 47.9) compared to those without initial CJI (M = 84.1, SD = 49.2), t (73) = 2.3, p = .03. Those reporting arrest at intake engaged in more days of alcohol use, on average, at 18 months (M = 111.4, SD = 47.1) than their counterparts (M = 86.1, SD = 49.1), t (25) = 2.2, p = .03. Participants who were incarcerated prior to intake also reported more mean days of alcohol use at 18 months (M = 112.4, SD = 48.7) compared to those who were not (M = 86.3, SD = 48.9), t (21) = 2.2, p = .04. Additional Welch t-tests conducted

using the remaining individual past criminal justice involvement measures were not significant at 18 months. Likewise, no statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average days of alcohol use reported at 24 months.

Summary. At six months, participants with initial CJI and, in particular, those who reported arrest, incarceration, or awaiting trial or sentencing at intake were more likely to report and engaged in more mean days of alcohol use compared to their counterparts. Thus, the null hypothesis was rejected at six months. At 12 months, as participants with initial CJI and, in particular, those awaiting trial or sentencing at intake reported more days of alcohol use, on average, compared to their counterparts, the null hypothesis was rejected. At 18 months, participants with initial CJI and, in particular, those who were arrested in the 30 days prior to intake were more likely to report alcohol use compared to their counterparts. Likewise, those with initial CJI and, in particular, those arrested or incarcerated in the 30 days prior to intake reported more mean days of alcohol use at 18 months. Thus, the null hypothesis was rejected at 18 months. As no associations were found between past criminal justice involvement and engaging in alcohol use at 24 months, and no differences were observed between participants with and without past criminal justice involvement with respect to average reported days of alcohol use, the null hypothesis was not rejected at 24 months.

Past CJI and Illegal Drug Use

Chi-square tests of independence and Welch *t*-tests were performed to test the null hypothesis:

H_0 = No difference is observed with respect to illegal drug use at six, 12, 18, or 24 months between participants with and without past criminal justice involvement

Results are presented below and summarized in Table 28.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and engaging in illegal drug use at six, 12, 18, or 24 months. *Illegal drug use* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants reporting illegal drug use or not). Of those with initial CJI, 29.2% reported illegal drug use at six months compared to 17.1% without initial CJI, χ^2 (1, N = 335) = 6.0, φ = .13, p = .02. Nearly one-third (31.8%) of those arrested in the 30 days prior to intake reported engaging in illegal drug use at six months compared to 18.8% of those who were not, χ^2 (1, N = 337) = 4.0, φ = .11, p = .05. Likewise, one-third (33.3%) of those awaiting trial or sentencing at intake reported illegal drug use at six months compared to 18.9% of their counterparts, χ^2 (1, N = 337) = 4.1, φ = .11, p = .04. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant at six months (see Table 28). Likewise, initial CJI was not associated with engaging in illegal drug use at 12, 18, or 24 months, nor were any of the individual past criminal justice involvement measures.

Welch *t*-test. Welch *t*-tests were also performed, for which *illegal drug use days* was measured continuously (range 0 – 30). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are presented in text, and both transformed and untransformed values can be found in Table

28.) On average, participants with initial CJI reported significantly more days of illegal drug use at six months (M = 183.2, SD = 77.1) compared to those without initial CJI (M = 163.5, SD = 64.5), t (135) = 2.2, p = .03. Additional Welch t-tests conducted using the individual past criminal justice involvement measures were not significant at six months. Likewise, no statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average days of illegal drug use reported at 12, 18, or 24 months.

Summary. At six months, participants with initial CJI were more likely to report and engaged in more mean days of illegal drug use compared to those without initial CJI. Participants who were arrested or awaiting trial or sentencing in the 30 days prior to intake were more likely to report illegal drug use at six months compared to their counterparts. Thus, the null hypothesis was rejected at six months. At 12, 18, and 24 months, no associations were found between past criminal justice involvement of LHFP participants and engaging in illegal drug use. Likewise, no differences were observed between participants with and without past criminal justice involvement with respect to average reported days of illegal drug use at 12, 18, or 24 months. Therefore, the null hypothesis was not rejected at 12, 18, or 24 months.

Past CJI and Criminal Behavior

Chi-square tests of independence and Welch t-tests were performed to test the null hypothesis:

> *H_0 = No difference is observed with respect to criminal behavior at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

Results are presented below and summarized in Table 29.

Chi-square. Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and engaging in criminal behavior at six, 12, 18, or 24 months. *Criminal behavior* was measured categorically (no = 0, yes = 1), and for each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants reporting criminal behavior or not). Overall, initial CJI was not associated with engaging in criminal behavior at six months, nor were any of the individual past criminal justice involvement measures (see Table 29). At 12 months, however, participants with initial CJI were more likely to report engaging in criminal behavior (30.2%) in the past 30 days compared to those without initial CJI (17.6%), χ^2 (1, N = 245) = 4.5, φ = .14, p = .03. Over one-third (36%) of participants who were incarcerated in the 30 days prior to intake reported engaging in criminal behavior at 12 months compared to 19.5% of those who were not, χ^2 (1, N = 246) = 3.7, φ = .12, p = .05. Of those awaiting trial or sentencing at intake, 35.7% reported engaging in criminal behavior at 12 months compared to 19.3% of their counterparts, χ^2 (1, N = 246) = 4.0, φ = .13, p = .05. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant at 12 months. Likewise, initial CJI of LHFP participants was not associated with engaging in criminal behavior at 18 or 24 months, nor were any of the individual past criminal justice involvement measures.

Welch *t*-test. Welch *t*-tests were also performed, for which *criminal behavior instances* was measured continuously (range 0 – 300). In order to satisfy the assumptions of the Welch *t*-test, a rank transformation was applied. (Transformed/ranked values are

presented in text, and both transformed and untransformed values can be found in Table 29.) No statistically significant differences were found between participants with and without any type of past criminal justice involvement with respect to average instances of criminal behavior reported at six, 12, 18, or 24 months.

Summary. At six months, no associations were found between past criminal justice involvement and engaging in criminal behavior, and no differences were observed between participants with and without past criminal justice involvement with respect to average reported instances of criminal behavior. Therefore, the null hypothesis was not rejected at six months. At 12 months, participants with initial CJI and, in particular, those who were incarcerated or awaiting trial or sentencing in the 30 days prior to intake were more likely to report engaging in criminal behavior compared to their counterparts. Thus, the null hypothesis was rejected at 12 months. At 18 and 24 months, no associations were found between past criminal justice involvement and engaging in criminal behavior. Likewise, no differences were observed between participants with and without past criminal justice involvement with respect to average instances of reported criminal behavior, and therefore the null hypothesis was not rejected at 18 or 24 months.

Do Participants with CJI Differ on Housing Outcomes at Specific Intervals of LHFP?

Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement among LHFP participants and housing outcomes at specific intervals of program exposure (i.e., six, 12, 18, and 24 months). At six months, no associations were found between past criminal justice involvement of LHFP participants and housing stability or program success. At 12 months, participants

Table 28.

Past criminal justice involvement and illegal drug use at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	φ	***p***
6 months	Initial CJI	89	183.2 (2.0)	77.1 (5.6)	246	163.5 (1.3)	64.5 (5.0)	2.2	135	.03	6.0	.13	.02
	Arrest	44	186.9 (1.6)	78.3 (3.9)	293	166.3 (1.5)	66.9 (5.3)	1.7	53	.10	4.0	.11	.05
	Incarceration	41	187.0 (1.7)	78.7 (4.0)	296	166.5 (1.5)	66.9 (5.3)	1.6	48	.12	3.6	.10	.06
	Awaiting	36	189.1 (2.0)	79.3 (5.6)	301	166.6 (1.5)	67.0 (5.1)	1.6	41	.11	4.1	.11	.04
	Supervision	38	183.2 (2.6)	78.4 (6.5)	297	166.9 (1.4)	67.1 (5.0)	1.2	44	.23	2.0	.08	.16
12 months	Initial CJI	63	126.2 (1.2)	50.9 (3.9)	181	121.4 (2.1)	50.4 (6.3)	0.6	107	.52	1.0	.07	.31
	Arrest	27	126.6 (1.3)	51.6 (4.3)	218	122.6 (1.9)	50.6 (5.9)	0.4	33	.70	0.4	.04	.53
	Incarceration	25	129.0 (1.4)	53.0 (4.5)	220	122.3 (1.9)	50.5 (5.9)	0.6	29	.55	0.8	.06	.38
	Awaiting	28	132.2 (1.2)	52.6 (4.1)	217	121.8 (1.9)	50.4 (6.0)	1.0	34	.33	2.3	.10	.13
	Supervision	30	124.5 (1.2)	51.1 (3.9)	214	122.4 (1.9)	50.5 (6.0)	0.2	37	.83	0.1	.02	.73
18 months	Initial CJI	43	93.2 (2.1)	35.4 (6.6)	133	87.1 (1.0)	28.9 (4.2)	1.0	61	.31	1.2	.08	.28
	Arrest	20	90.1 (1.8)	33.2 (6.7)	157	88.9 (1.3)	30.8 (4.6)	0.2	23	.89	0.01		1.0
	Incarceration	18	91.6 (2.0)	34.8 (7.1)	159	88.7 (1.2)	30.7 (4.6)	0.3	20	.74	0.1		.72
	Awaiting	17	97.2 (1.9)	38.6 (6.0)	160	88.1 (1.2)	30.1 (4.8)	0.9	18	.36	1.4		.27
	Supervision	20	89.7 (1.4)	32.4 (4.7)	156	88.4 (1.3)	30.5 (4.9)	0.2	24	.87	0.04		.74
24 months	Initial CJI	30	68.0 (2.0)	26.6 (6.2)	99	64.3 (1.4)	23.1 (5.3)	0.7	43	.49	0.6		.57
	Arrest	17	62.6 (1.8)	21.8 (7.3)	113	65.9 (1.5)	24.5 (5.2)	-0.6	23	.58	0.3		1.0
	Incarceration	15	63.7 (2.1)	23.1 (7.7)	115	65.7 (1.5)	24.4 (5.2)	-0.3	18	.75	0.1		1.0
	Awaiting	12	71.2 (2.0)	29.4 (5.0)	118	64.9 (1.5)	23.6 (5.6)	0.7	12	.49	0.8		.41
	Supervision	11	66.1 (0.5)	24.7 (1.0)	118	65.1 (1.6)	23.9 (5.8)	0.1	12	.90	0.1		.68

Note: When expected count < 5, Fisher's exact test used, φ omitted. Untransformed (unranked) means and standard deviations shown in parentheses.

Table 29.

Past criminal justice involvement and criminal behavior at six, 12, 18, & 24 months

		CJI			No CJI			*t*-test			χ^2 test		
Interview	**Measure**	***N***	***M***	***SD***	***N***	***M***	***SD***	***t***	***df***	***p***	χ^2	***φ***	***p***
6 months	Initial CJI	89	176.2 (2.5)	68.6 (10.9)	246	166.0 (1.2)	59.2 (4.7)	1.2	138	.22	1.8	.07	.18
	Arrest	44	175.7 (2.7)	67.6 (14.0)	293	168.0 (1.3)	61.4 (5.1)	0.7	54	.48	0.7	.05	.39
	Incarceration	41	178.2 (2.9)	69.5 (14.5)	296	167.7 (1.3)	61.2 (5.1)	0.9	49	.37	1.2	.06	.27
	Awaiting	36	183.3 (1.5)	73.0 (5.2)	301	167.3 (1.5)	60.7 (7.1)	1.3	41	.21	2.4	.09	.12
	Supervision	38	173.4 (1.9)	67.4 (5.8)	297	168.0 (1.5)	61.3 (7.1)	0.5	45	.64	0.2	.03	.64
12 months	Initial CJI	63	133.4 (4.4)	55.7 (25.3)	182	119.6 (1.7)	48.3 (5.8)	1.8	96	.08	4.5	.14	.03
	Arrest	27	136.4 (1.5)	56.6 (4.3)	219	121.9 (2.6)	49.9 (14.5)	1.3	31	.21	2.7	.11	.10
	Incarceration	25	139.5 (1.6)	57.7 (4.5)	221	121.7 (2.5)	49.8 (14.4)	1.5	28	.15	3.7	.12	.05
	Awaiting	28	139.5 (8.4)	58.1 (37.8)	218	121.4 (1.7)	49.5 (5.5)	1.6	32	.13	4.0	.13	.05
	Supervision	30	129.5 (1.3)	54.3 (3.9)	215	122.2 (2.6)	50.1 (14.6)	0.7	36	.50	0.7	.05	.40
18 months	Initial CJI	43	92.1 (2.1)	33.6 (7.0)	133	87.4 (1.0)	28.1 (4.0)	0.8	62	.42	0.7	.07	.39
	Arrest	20	90.8 (1.9)	32.6 (7.6)	157	88.8 (1.2)	29.7 (4.5)	0.3	23	.80	0.1		.73
	Incarceration	18	92.3 (2.1)	34.1 (8.0)	159	88.6 (1.2)	29.5 (4.5)	0.4	20	.67	0.2		.71
	Awaiting	17	88.1 (1.6)	30.0 (6.1)	160	89.1 (1.2)	30.0 (4.8)	-0.1	20	.90	0.03		1.0
	Supervision	20	90.7 (1.4)	32.4 (4.7)	156	88.3 (1.2)	29.2 (5.0)	0.3	23	.75	0.1		.72
24 months	Initial CJI	29	69.6 (3.3)	27.1 (12.9)	99	63.2 (1.0)	20.4 (4.7)	1.2	38	.25	1.8		.22
	Arrest	16	68.4 (4.6)	26.7 (16.9)	113	64.5 (1.1)	22.0 (4.7)	0.6	18	.59	0.4		.70
	Incarceration	14	70.1 (5.3)	28.3 (18.1)	115	64.4 (1.1)	21.8 (4.6)	0.7	15	.47	0.7		.41
	Awaiting	12	72.2 (1.9)	29.4 (5.0)	117	64.3 (1.5)	21.7 (7.6)	0.9	12	.38	1.3		.37
	Supervision	10	68.7 (0.5)	26.7 (1.1)	118	64.3 (1.6)	21.9 (7.7)	0.5	10	.63	0.4		.62

Note: When expected count < 5, Fisher's exact test used, φ omitted. Untransformed (unranked) means and standard deviations shown in parentheses.

with initial CJI and, in particular, those who reported arrest, incarceration, or community supervision at intake were less likely to have a successful program outcome compared to their counterparts. No associations were found between past criminal justice involvement of any type and housing stability at 12 months.

At 18 months, participants with initial CJI and, in particular, those who were arrested or incarcerated in the 30 days prior to intake were less likely to have a successful program outcome compared to their counterparts. No associations were found between any type of past criminal justice involvement and housing stability at 18 months. At 24 months, participants with initial CJI and, in particular, those subject to probation or parole supervision at intake were less likely to remain in LHFP and less likely to have a successful program outcome compared to their counterparts.

Past CJI and Housing Stability

Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement and housing stability at six, 12, 18, or 24 months. *Housing stability* was measured categorically (no = 0, yes = 1), and indicates whether or not a participant remained housed in LHFP. For each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants remaining housed in LHFP or not) to test the null hypothesis:

> *H_0 = No difference is observed with respect to housing stability at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

At six, 12, and 18 months, initial CJI of LHFP participants was not associated with housing stability, nor were any of the individual past criminal justice involvement measures (see Table 30). Thus, the null hypothesis was not rejected at six, 12, or 18

Table 30.

Past criminal justice involvement and housing outcomes at six, 12, 18, & 24 months

		Housing stability				Program success			
Interview	**Measure**	***N***	χ^2	φ	***p***	***N***	χ^2	φ	***p***
6 months	Initial CJI	349	0.2		.71	349	5.4		.07
	Arrest	351	0.04		1.0	351	2.3		.25
	Incarceration	352	0.02		1.0	352	2.6		.24
	Awaiting	352	1.3		.25	352	3.2		.21
	Supervision	350	0.9		.30	350	2.8		.23
12 months	Initial CJI	306	3.6	-.11	.06	306	6.5	-.15	.02
	Arrest	307	3.6	-.11	.06	307	7.2		.02
	Incarceration	308	2.8	-.10	.09	308	5.2		.04
	Awaiting	308	0.1	.02	.74	308	0.1		1.0
	Supervision	307	3.0	-.10	.08	307	6.2	-.14	.03
18 months	Initial CJI	262	3.6	-.12	.06	262	6.0	-.15	.01
	Arrest	263	3.2	-.11	.08	263	6.8	-.16	.01
	Incarceration	264	3.1	-.11	.08	264	6.1	-.15	.01
	Awaiting	264	1.9	-.09	.17	264	2.1	-.09	.15
	Supervision	263	0.6	-.05	.43	263	2.0	-.09	.16
24 months	Initial CJI	226	4.4	-.14	.04	226	7.2	-.18	.01
	Arrest	227	0.8	-.06	.37	227	2.8	-.11	.09
	Incarceration	228	1.0	-.07	.33	228	2.7	-.11	.10
	Awaiting	228	2.4	-.10	.12	228	2.7	-.11	.10
	Supervision	227	3.9	-.13	.05	227	7.1	-.18	.01

Note: When expected count <5, Fisher's exact test used, φ omitted.

months.

At 24 months, however, under one-half (49.2%) of participants with initial CJI remained housed through LHFP compared to 64.4% of those without initial CJI, χ^2 (1, N = 226) = 4.4, φ = -.14, p = .04. Likewise, 42.9% of those subject to community supervision at intake remained housed through LHFP at 24 months compared to 62.3% of their counterparts, χ^2 (1, N = 227) = 3.9, φ = -.13, p = .05. Therefore, the null hypothesis was rejected at 24 months. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant (see Table 30).

Past CJI and Program Success

Chi-square tests of independence were performed to determine if a relationship exists between past criminal justice involvement of LHFP participants and program success at six, 12, 18, or 24 months. *Program success* was measured categorically (no = 0, yes = 1), and indicates whether or not a participant completed or "graduated" from LHFP, remained housed in LHFP, or died while housed in LHFP. For each interval of program exposure, data were analyzed using a 2 x 2 χ^2 (participants experiencing past criminal justice involvement or not x participants successful in program or not) to test the null hypothesis:

> *H_0 = No difference is observed with respect to program success at six, 12, 18, or 24 months between participants with and without past criminal justice involvement*

At six months, initial CJI of LHFP participants was not associated with program success, nor were any of the individual past criminal justice involvement measures (see Table 30). Therefore, the null hypothesis was not rejected at six months.

At 12 months, 82.4% of participants with initial CJI had a successful program outcome compared to 92.3% of those without initial CJI, χ^2 (1, N = 306) = 6.5, φ = -.15, p = .02. Just over three-quarters (78.0%) of those subject to probation or parole supervision at intake had a successful outcome at 12 months compared to 91% of their counterparts, χ^2 (1, N = 307) = 6.2, φ = -.14, p = .03. In addition, statistically significant associations were found between both arrest and incarceration at intake and program success at 12 months, but as each test produced one expected count below five, Fisher's exact tests were conducted (Campbell, 2007; Cochran, 1954). Just over three-quarters (77.5%) of participants who were arrested in the 30 days prior to intake had a successful outcome at

12 months compared to 91.4% of their counterparts, χ^2 (1, N = 307) = 7.2, p = .02. Likewise, 78.4% of those who reported incarceration at intake had a successful outcome at 12 months compared to 90.8% of those who did not, χ^2 (1, N = 308) = 5.2, p = .04. Thus, the null hypothesis was rejected at 12 months. An additional Fisher's exact test conducted using the remaining individual past criminal justice involvement measure was not significant at 12 months (see Table 30).

At 18 months, participants with initial CJI were less likely to have a successful outcome (69.4%) compared to those without initial CJI (83.2%), χ^2 (1, N = 262) = 6.0, φ = -.15, p = .01. Of participants who reported arrest at intake, 62.9% had a successful outcome at 18 months compared to 82% of their counterparts, χ^2 (1, N = 263) = 6.8, φ = -.16, p = .01. Likewise, 62.5% of participants who were incarcerated in the 30 days prior to intake had a successful outcome at 18 months compared to 81.5% of those who were not, χ^2 (1, N = 264) = 6.1, φ = -.15, p = .01. Therefore, the null hypothesis was rejected at 18 months. Additional chi-square tests of independence conducted using the remaining individual past criminal justice involvement measures were not significant at 18 months (see Table 30).

At 24 months, 58.7% of participants with initial CJI had a successful outcome compared to 76.7% of those without initial CJI, χ^2 (1, N = 226) = 7.2, φ = -.18, p = .01. One-half (50.0%) of those subject to community supervision at intake had a successful outcome at 24 months compared to nearly three-quarters (74.4%) of their counterparts, χ^2 (1, N = 227) = 7.1, φ = -.18, p = .01. Therefore, the null hypothesis was rejected at 24 months. Additional chi-square tests of independence conducted using the remaining

individual past criminal justice involvement measures were not significant at 24 months (see Table 30).

Research Question Three

Binary logistic regression models were developed to answer the final primary research question:

3. *Does past criminal justice involvement among LHFP participants influence housing outcomes at 24 months?*

All assumptions for the use of binary logistic regression were met, unless stated otherwise. Housing outcomes included *housing stability* (0 = no, 1 = yes), which indicates whether or not a participant remained housed through LHFP at 24 months, and *program success* (0 = no, 1 = yes), which indicates whether or not a participant remained housed in LHFP, successfully "graduated" to unassisted housing, or died while housed in LHFP. Participant demographics (i.e., *gender*, *race*, *age*, *education*, *number of children*, *employment status*, *income in the past 30 days*, and *social support*), past criminal justice involvement (i.e., *initial CJI*), mental health (i.e., *depression*, *anxiety*, *hallucinations*, *impaired brain function*, and *any mental health*), and risky behavior (i.e., *violent behavior*, *alcohol use*, *illegal drug use*, *criminal behavior*, and *any risky behavior*) at intake were considered for inclusion as possible predictors of housing outcomes at 24 months.

Does CJI of LHFP Participants Influence Housing Outcomes?

At 24 months, participants with initial CJI were less likely to remain housed through LHFP and less likely to have a successful program outcome compared to those without initial CJI. Those who reported social support at intake were more likely to remain housed through LHFP at 24 months compared to those who did not. Age and

Table 31.

Logistic regression model predicting housing stability at 24 months

							95% CI for OR	
	B	***SE***	***Wald***	***df***	***p***	**Odds Ratio**	**Lower**	**Upper**
Initial CJI	-0.62	.32	3.7	1	.05	0.54	0.29	1.01
Social support	0.60	.30	4.1	1	.04	1.82	1.02	3.24
Age	0.33	.13	6.7	1	.01	1.39	1.08	1.78
Education	1.21	.52	5.4	1	.02	3.36	1.21	9.32
Age x education	-0.03	.01	6.9	1	.01	0.97	0.95	0.99

Note: The reference group for *initial CJI* is participants without past CJI (0). The reference group for *social support* is participants without social support (0).

education were significant predictors for both housing stability and program success at 24 months, but in both models, the effect of age was moderated by education, and vice versa. For younger participants, education had a positive effect on housing stability and program success at 24 months. As participant age increased, however, this positive moderating effect diminished such that, for those over 43 years old, the likelihood of remaining housed through LHFP at 24 months decreased as education increased. Likewise, for participants over age 45, the likelihood of program success at 24 months decreased as a participant's education increased.

Housing Stability at 24 Months

A binary logistic regression was performed to assess the determinants of housing stability at 24 months among LHFP participants. Two outliers were detected based on inspection of standardized residuals (i.e., zresid ≥ 2.5) but were not removed from the analysis. Using the Box-Tidwell (1962) procedure, each continuous variable included in the model satisfied the assumption of linearity in the logit of the dependent variable, and no multicollinearity was detected among the independent variables considered for inclusion in the preliminary model (i.e., VIF < 2.5). Univariable analyses identified seven variables for inclusion in the model, including *education*, *employment status*, *social*

support, *initial CJI*, *depression at intake* (no/yes), *anxiety at intake* (no/yes), and *risky behavior at intake* (no/yes). Based on previous research, *age*, *race*, and *days of violent behavior at intake* were also included in the preliminary model. The final model for predicting housing stability at 24 months (see Table 31) included five predictor variables: *age*, *education*, *initial CJI*, *social support*, and *age x education* (i.e., an interaction term).

The model was statistically significant, $\chi^2 = 20.9$, $p = .001$ and explained 12.3% (Nagelkerke R^2) of the variance in housing stability at 24 months. The model correctly classified 64.4% of cases, with a positive prediction value of 65% and a negative prediction value of 61.5%. The sensitivity of the model was 88.6% and the specificity 27.6%. The odds of remaining in LHFP at 24 months were 1.9 times higher for participants without initial CJI compared to those with some type of past criminal justice involvement. Likewise, the odds of remaining in LHFP at 24 months were 1.8 times higher for participants who reported social support at intake compared to those who did not. The interaction term between age and education was also statistically significant (see Table 31). As education increased, younger participants were more likely to remain housed through LHFP, while those over 43 years old were less likely to remain housed at 24 months.

Program Success at 24 Months

A binary logistic regression was performed to assess the determinants of a successful program outcome at 24 months among LHFP participants. Based on inspection of standardized residuals, no significant outliers were present (i.e., all zresid ≤ 2.5). Using the Box-Tidwell (1962) procedure, each continuous variable satisfied the assumption of linearity in the logit of the dependent variable, and no multicollinearity was detected

Table 32.

Logistic regression model predicting program success at 24 months

							95% CI for OR	
	B	***SE***	***Wald***	***df***	***p***	**Odds Ratio**	**Lower**	**Upper**
Initial CJI	-0.74	.33	4.9	1	.03	0.48	0.25	0.92
Age	0.40	.13	9.0	1	<.01	1.49	1.15	1.94
Education	1.45	.54	7.2	1	.01	4.27	1.48	12.31
Age x education	-0.03	.01	8.4	1	<.01	0.97	0.95	0.99

Note: The reference group for *initial CJI* is participants without past CJI (0).

among the independent variables considered for inclusion in the preliminary model (i.e., all VIF < 2.5). Univariable analyses identified three variables for inclusion in the model, including *education*, *number of children*, and *initial CJI*. Based on previous research, *age*, *race*, *social support*, and *days of violent behavior at intake* were also included in the preliminary model. The final model for predicting program success at 24 months (see Table 32) included four predictor variables: *age*, *education*, *initial CJI*, and *age x education* (i.e., an interaction term).

The model was statistically significant, $\chi^2 = 18.8$, $p = .001$ and explained 11.8% (Nagelkerke R^2) of the variance in program success at 24 months. The model correctly classified 75.3% of cases, with a positive prediction value of 74.8% and a negative prediction value of 84.6%. The sensitivity of the model was 98.7% and the specificity 17.5%. The odds of having a successful program outcome at 24 months were 2.1 times higher for participants without initial CJI compared to those with some type of past criminal justice involvement. The interaction term between age and education was also statistically significant (see Table 32). As education increased, younger participants were more likely to have a successful outcome, but for those over 45 years old, the likelihood of program success at 24 months decreased.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The present study examined the differences between individuals with and without criminal justice involvement who participated in a Housing First program in Louisville, Kentucky. Between 2008 and 2017, FHC-Phoenix enlisted individuals with a history of chronic homelessness and co-occurring substance abuse and/or mental health disorder. The 368 participants who completed an intake interview, were placed in housing, and did not enter the program more than once were included in the analyses. By statistically comparing their experiences and outcomes within the context of LHFP, this research found that differences existed between these two groups of participants. This chapter provides a summary of the purpose, primary research questions, methodology, and main findings of the present study. Contributions to knowledge, directions for future research, and policy implications are discussed, and critical race theory is used as a lens through which the findings can be understood and placed in a larger context. The chapter ends with a discussion of limitations and conclusions.

Contributions to Knowledge and Policy Implications

The previous chapter explored participant experiences and outcomes in an urban housing assistance program that utilized the HF model and accepted individuals regardless of their criminal background. The aim of this study was to determine whether criminal justice involvement was a factor in the outcomes realized by LHFP participants.

The purpose of the research was to add evidence to the ongoing policy debate over whether or not exclusions based on criminal justice involvement are justified for housing assistance programs in general. Three primary research questions were considered:

1. *Do LHFP participants with criminal justice involvement differ from those without criminal justice involvement at program onset?*
2. *Do LHFP participants with past criminal justice involvement differ from those without past criminal justice involvement at specific intervals of program exposure?*
3. *Does past criminal justice involvement among LHFP participants influence housing outcomes at 24 months?*

The first two research questions were addressed through bivariate analyses conducted using the Pearson chi-square test of independence and the Welch independent samples *t*-test. For the final research question, predictive models of housing outcomes at 24 months were developed using binary logistic regression.

Criminal Justice Involvement and Demographics

Participants were largely similar demographically. However, participants subject to probation or parole supervision at intake were more likely to report interaction with supportive family and/or friends (i.e., social support) compared to their counterparts. Social support was also a significant predictor of housing stability at 24 months. The odds of remaining housed through LHFP at 24 months were 1.8 times higher for participants who reported social support at intake compared to those who did not. Given that they were more likely to report social support, it is surprising, then, that those subject to probation or parole supervision at intake were statistically less likely to remain in LHFP at 24 months.

Social Support

Several studies have attempted to establish the role that social support plays in homelessness and housing stability (Calsyn & Winter, 2002; Fitzpatrick et al., 2007; Johnstone et al., 2015; Lam & Rosenheck, 1999; Winetrobe et al., 2017). Social support has been linked to improvements in mental and physical health (Fitzpatrick et al., 2007), increased housing stability (Bassuk et al., 1997; Calsyn & Winter, 2002; Duchesne & Rothwell, 2016; Durbin et al., 2018; Herbert et al., 2015; Homelessness Policy Research Institute, 2018), and lower rates of recidivism (La Vigne et al., 2009; LeBel, Burnett, Maruna, & Bushway, 2008). Notably, in contrast to the findings of the present study, Herbert and colleagues (2015) found that receiving social support from family members or romantic partners led to lower rates of housing instability and homelessness among individuals with criminal justice involvement.

However, the findings of the present study may provide further evidence that social support is not always beneficial for individuals experiencing chronic homelessness (Barrenger, Draine, Angell, & Herman, 2017; Fitzpatrick et al., 2007; Kirk, 2009). Simply stated, the nature of the relationship may matter a great deal with respect to the potential benefits and disadvantages imparted by social support. Fitzpatrick and colleagues (2007) considered the role of social support in suicide ideation among individuals experiencing homelessness and discovered a complex relationship between social ties and the wellbeing and mental health of individuals experiencing homelessness. The authors emphasized the important differences between bonding social capital, which consists of connections to those in one's social circle (i.e., others who are disadvantaged and marginalized), and bridging social capital, characterized by connections to those

outside of one's social circle. Bridging social capital, or connections with "non-homeless" individuals, was found to provide "critical access to resources not available within their own social circle," which led to improvements in physical and mental health, while bonding social capital did not provide similar benefits and may have increased the likelihood of suicide among those with depression (p. 758).

These varied findings regarding social support may shed light on the results of the present study. Although participants subject to community supervision were more likely to report social support at intake and less likely to remain housed at 24 months, no information was available regarding the nature of these supportive relationships. Future research should include more nuanced measures of social support to better inform our understanding of the role it plays in housing outcomes, especially among individuals with criminal justice involvement.

When the social support takes the form of family or others outside their social circle, outcomes are more likely to be positive. Policies that prohibit people with criminal justice involvement from living with family members in assisted housing may be counterproductive, as these connections have been shown to improve the lives of the disadvantaged and marginally housed (Fitzpatrick et al., 2007; Herbert et al., 2015). Beyond family, case managers should continue to encourage their clients to interact with neighbors and other community members, as these connections may be advantageous for access to resources and overall wellbeing. Restrictions regarding household members with criminal justice involvement seem particularly counterintuitive in light of these findings; given the important benefits associated with social support, federal policies,

program administrators, and service providers should encourage rather than deter cohabitation or visitation with family and other supportive individuals.

Age and Education

Although no differences were observed between participants with and without criminal justice involvement with respect to any of the remaining demographic variables, age and education were predictors of housing stability and program success at 24 months. In each binary logistic regression model, the interaction term between age and education was statistically significant, which indicates that the effect of age on housing outcomes was moderated by education, and vice versa. For younger participants, education had a positive effect on housing stability and program success at 24 months. As participant age increased, however, this positive moderating effect diminished such that, for those over 43 years old, the likelihood of remaining housed through LHFP at 24 months decreased as education increased. Likewise, for participants over age 45, the likelihood of program success at 24 months decreased as their education increased.

These findings are consistent with several studies that have found higher rates of housing instability and homelessness among individuals born between the mid-1950s and mid-1960s[10] (i.e., "late baby boomers"; Culhane et al., 2013, p. 10; see also Byrne et al., 2013; Fargo et al., 2012; Henwood, Katz, & Gilmer, 2014; Israel, Toro, & Ouellette, 2010), and a considerable amount of research has focused on negative cohort effects among this population (Card & Lemieux, 2001; Ghilarducci, Papadopoulos, & Radpour, 2017; Kahn, 2010; Pryor & Schaffer, 2000; Sapozhnikov & Treist, 2007). A great number

[10] The majority of LHFP participants (59.2%) were born between 1945 and 1964, which places them in the baby boom generation (Colby & Ortman, 2015), and over 50 percent were born between 1954 and 1964 and would be considered "late baby boomers" (Culhane, Metraux, Byrne, Stino, & Bainbridge, 2013, p. 10).

of factors led to disadvantages among those born at the end of the baby boom. These individuals came of age during the economic recessions of the late 1970s and early 1980s (Culhane et al., 2013), which negatively impacted their long-term employment and wage prospects (Kahn, 2010). Further, large numbers of young men entered college in the 1970s, when female college attendance rates were on the rise. The influx of newly educated workers into the job market lowered wages, and more college graduates were forced into entry-level jobs (Card & Lemieux, 2001). These problems were compounded by an increased demand for social welfare services in the 1980s brought about by this large cohort, while at the same time, the war on drugs and "anti-welfare sentiments" (Culhane et al., 2013, p. 11) led to increasingly restrictive and punitive policies regarding eligibility for public assistance.

These conditions disproportionately impacted the late baby boom cohort and "created an underlying vulnerability that resulted in a sustained risk for housing instability over the ensuing decades" (Culhane et al., 2013, p. 11). As this population continues to age, they will require long-term assistance with health care, housing, and other supportive services (Brown, Kiely, Bharel, & Mitchell, 2012). The precise risk factors for housing instability and homelessness among this group are still unknown, however (Culhane et al., 2013), and future research should focus on identifying the determinants of homelessness among this population in order to better address their increasingly complex needs. By coordinating approaches to and facilitating funding for the provision of these services, local, state, and federal agencies can work together to ensure that the needs of this vulnerable group are met. In line with recommendations from prior research into homelessness among this aging population, funding for

permanent supportive housing (PSH), which has been shown to be particularly beneficial for these high-need individuals, should be prioritized (Culhane et al., 2013; Henwood et al., 2014).

Future research should also examine the unique manifestation of homelessness among younger cohorts, particularly the generation that came of age during the most recent economic crisis, in order to better anticipate their future needs. In light of the findings of the present study, younger individuals may derive distinct benefits from education. Thus, housing assistance programs, such as LHFP, might encourage younger participants to seek educational advancement and consider prioritizing these individuals in the presence of scarce opportunities. It is possible, however, that additional, unobserved factors associated with educational attainment (i.e., childhood neighborhood, family class, etc.) may better explain these differences. Echoing the above recommendation regarding the late baby boom generation, future research should also attempt to identify the unique risk factors of homelessness among different age cohorts in order to improve provision of services over time.

Criminal Justice Involvement and Mental Health

In the 30 days prior to intake, participants with a history of arrest or incarceration were more likely than their counterparts to report any mental health condition. At intake, serious depression was more likely among those reporting arrest or incarceration, and serious anxiety was more likely among those awaiting trial or sentencing. Those reporting arrest, incarceration, or awaiting trial or sentencing were more likely to report hallucinations at intake. Likewise, participants who reported initial CJI, arrest, incarceration, or awaiting trial or sentencing reported experiencing, on average, more

days of any mental health condition at intake compared to their counterparts. On average, more days of serious depression were reported at intake by those who were arrested, incarcerated, or awaiting trial or sentencing, more days of serious anxiety were reported by those awaiting trial or sentencing, and more days of hallucinations were reported by those with a history of arrest or incarceration. No differences were observed with respect to mental health conditions reported by those who were and were not subject to community supervision at intake.

At six months, no differences were observed with respect to mental health conditions reported by participants with and without any type of criminal justice involvement. At 12 months, serious depression was more likely among those with initial CJI, and serious anxiety was more likely among those with initial CJI and those on probation or parole. Those reporting arrest or awaiting trial or sentencing at intake were more likely than their counterparts to report experiencing hallucinations at 12 months. Participants who reported initial CJI or incarceration also reported experiencing more mean days of any mental health condition at 12 months, with more mean days of serious depression reported by those with initial CJI and those awaiting trial or sentencing, and more days of serious anxiety reported by those with initial CJI, arrest, incarceration, and those awaiting trial or sentencing.

At 18 months, no mental health differences were observed between those who did and did not report any type of criminal justice involvement. At 24 months, participants who reported criminal justice involvement at intake were not more likely to experience and did not report more days of mental health conditions. In fact, compared to their counterparts, participants subject to probation or parole supervision reported experiencing

fewer days of any mental health condition, serious depression, and impaired brain function at 24 months.

To summarize, LHFP participants with criminal justice involvement, as a group, reported experiencing more mental health conditions at intake and at 12 months compared to those without criminal justice involvement. This is consistent with previous studies, which have found that individuals with criminal justice involvement experience mental health disorders at higher rates than the general population (Bazelon Center for Mental Health Law, 2020; Bronson & Berzofsky, 2017; Steinberg, Mills, & Romano, 2015). In addition to holding the distinction of being the world's leader in incarceration (HUD, 2016; The Sentencing Project, 2021), the U.S. also imprisons more individuals with mental illness than any other nation (Fuller, Sinclair, Lamb, Cayce, & Snook, 2017). Following the American deinstitutionalization movement (Fuller et al., 2017; Steinberg et al., 2015), the number of incarcerated individuals experiencing mental illness rose by over 600 percent (Applebaum, 2011; Erickson & Erickson, 2008). Today, correctional facilities house three times the number of individuals with mental illness than hospitals (Torrey, Kennard, Eslinger, Lamb, & Pavle, 2010).

Some scholars have characterized America's jails and prisons as *de facto* mental institutions (Cloyes, Wong, Latimer, & Abarca, 2010; Jones & Sawyer, 2019; Torrey et al., 2010), the new asylums (Fuller et al., 2017), and warehouses for the mentally ill (Black, Davis, Gray, O'Shea, & Scheuer, 2019; Felthous, 2014; see also Wacquant, 2009). Jails and prisons are not effective in delivering mental health care (Black et al., 2019). To the contrary, the provision of mental health services in jails and prisons is constrained due to overcrowding, limited funding, inadequate or nonexistent training for

correctional officers, and a lack of mental healthcare professionals (Applebaum, 2011; Steinberg et al. 2015). This may explain why fewer than one-third of inmates who were taking medication for a diagnosed mental health condition prior to incarceration received pharmacotherapy while incarcerated (Bronson & Berzofsky, 2017; Gonzalez & Connell, 2014) and why individuals often leave prison with new or worsened physical and mental health problems (La Vigne et al., 2009). Mental illness has been shown to contribute to housing instability and homelessness, particularly among those with criminal justice involvement (Aidala, McAllister, Yomogida, & Shubert, 2014; Barrenger et al., 2017; Freudenberg, 2001; Metraux & Culhane, 2004), and experiencing mental illness or housing insecurity increases the likelihood of criminal justice contact, for those with a history of criminal justice involvement and those without (Brekke, Prindle, Bae, & Long, 2001; Clark, Ricketts, & McHugo, 1999; Cloyes et al., 2010; Herbert et al., 2015; Kushel, Hahn, Evans, Bangsberg, & Moss, 2005; Lamb & Weinberger, 1998; Lutze et al., 2014; Mallik-Kane, 2005; Wilson, Draine, Hadley, Metraux, & Evans, 2011).

Although mental health differences were observed at intake and at 12 months, LHFP participants with criminal justice involvement did not differ from those without involvement at 18 months. Further, at 24 months, certain participants with criminal justice involvement reported experiencing *fewer* days of mental health conditions compared to their counterparts. These findings are consistent with a body of research that has found that access to stable housing may lead to improvements in mental health among individuals with a history of chronic homelessness (Addo, Yuma, Barrera, & Layton, 2021; Hayes, Zonneville, & Bassuk, 2013; HUD, 2015b; Westat, 2011), including those with substance abuse or mental health disorders (Aidala et al., 2014; Atherton & Nicholls,

2008; Culhane et al., 2002; O'Campo et al., 2016; Padgett et al., 2011; Tsemberis, Kent, & Respress, 2012; Urbanoski et al., 2017) and those with criminal justice involvement (Roman, McBride, & Osborne, 2006). Burt and Anderson (2005) found that individuals with a history of chronic homelessness who were stably housed were better able to stay engaged in mental health treatment services, which could explain the improvements observed in mental health among LHFP participants with criminal justice involvement.

The relationship was correlative, not causal. We do not know if stable housing produced better mental health outcomes or if effective mental health treatment led to housing stability among LHFP participants. However, improvements in mental health have been shown to lead to increased housing stability (Burt & Anderson, 2005; Kyle & Dunn, 2008; Mayberg, 2003) and reduced rates of recidivism (Culhane et al., 2002). Numerous studies have suggested that "returning prisoners with mental illness might benefit most from permanent supportive housing" (Roman & Travis, 2006, p. 409), but LHFP participants with initial CJI and, in particular, those subject to probation or parole supervision were less likely to remain housed through LHFP at 24 months compared to their counterparts. Indeed, this suggests that, although individuals with criminal justice involvement saw improvements in mental health at later intervals of program exposure, additional barriers may be preventing them from maintaining housing.

Fifteen years after Roman and colleagues (2006) declared that "research on 'what works' in housing persons with mental illness who have had contact with the criminal justice system is sorely lacking" (p. 12), significant questions remain. Future studies should more closely examine the relationship between mental health and housing outcomes for people with criminal justice involvement in particular. The findings of the

present study indicate that service providers and case managers should encourage participants with criminal justice involvement to seek mental health treatment early in the program, given differences observed at intake and earlier intervals of program exposure. It appears that access to stable housing may have leveled the playing field with respect to mental health, but individuals with criminal justice involvement seemingly still face barriers to remaining housed that their counterparts do not. Criminal justice involvement should be considered an indicator of need rather than a reason to exclude individuals from housing assistance programs, particularly in light of the improvements observed in mental health among LHFP participants with criminal justice involvement.

Criminal Justice Involvement and Risky Behavior

In the 30 days prior to intake, participants with initial CJI were more likely than those without initial CJI to report any risky behavior, trouble controlling violent behavior, alcohol use, and criminal behavior. LHFP participants who were arrested, incarcerated, or awaiting trial or sentencing were more likely than their counterparts to report any risky behavior, alcohol use, illegal drug use, and criminal behavior upon entering LHFP. Likewise, those who reported arrest or incarceration were more likely to report experiencing trouble controlling violent behavior at intake. On average, participants with initial CJI scored higher on the risky behavior scale at intake and reported more trouble controlling violent behavior, alcohol use, and criminal behavior, compared to those without initial CJI. Participants who were arrested, incarcerated, or awaiting trial or sentencing had higher average risky behavior scores, and more mean days of trouble controlling violent behavior were reported by those with a history of arrest or incarceration. More days of alcohol use and criminal behavior were reported by those

arrested, incarcerated, or awaiting trial or sentencing, and more illegal drug use was reported by those awaiting trial or sentencing. No differences were observed at intake with respect to risky behavior reported by those who were and were not subject to probation or parole supervision.

At six months, participants who reported initial CJI were more likely to report engaging in any risky behavior, alcohol use, and illegal drug use. LHFP participants with a history of arrest or incarceration were more likely than their counterparts to report any risky behavior and trouble controlling violent behavior at six months. Alcohol use was more likely among participants who were arrested, incarcerated, or awaiting trial or sentencing, and illegal drug use was more likely at six months among those who reported arrest or awaiting trial or sentencing. LHFP participants with initial CJI also scored higher on the risky behavior scale and reported more mean days of alcohol and illegal drug use at six months compared to those without initial CJI. Participants who were arrested, incarcerated, or awaiting trial or sentencing had higher average risky behavior scores. On average, more days of trouble controlling violent behavior were reported by those with a history of arrest or incarceration, and more alcohol use was reported at six months by those arrested, incarcerated, or awaiting trial or sentencing.

At 12 months, participants with initial CJI were more likely than those without to report engaging in any risky behavior and criminal behavior. Trouble controlling violent behavior was more likely at 12 months among those with a history of arrest or incarceration, and criminal behavior was more likely among those reporting incarceration or awaiting trial or sentencing. LHFP participants with initial CJI also had higher average scores on the risky behavior scale and reported more mean days of alcohol use at 12

months. On average, more trouble controlling violent behavior was reported by those with a history of arrest or incarceration, and more alcohol use was reported at 12 months among those awaiting trial or sentencing.

At 18 months, participants with initial CJI, and in particular those with a history of arrest, were more likely to report engaging in alcohol use. Likewise, LHFP participants who reported initial CJI, arrest, or incarceration reported engaging in more mean days of alcohol use compared to their counterparts at 18 months. No differences were observed with respect to any risky behavior, violent behavior, illegal drug use, or criminal behavior reported at 18 months. At 24 months, participants who reported criminal justice involvement at intake were not more likely to report and did not report more days of any type of risky behavior. In fact, those subject to probation or parole supervision reported fewer days of trouble controlling violent behavior at 24 months compared to their counterparts.

Substance Use

To summarize, LHFP participants with criminal justice involvement generally reported more substance use at intake compared to those without some type of criminal justice involvement. Given that LHFP specifically targets individuals with a history of a mental health and/or substance abuse disorder, it is not surprising that 55 percent of all LHFP participants reported alcohol use in the past 30 days at intake. However, over two-thirds of participants with criminal justice involvement reported alcohol use at intake, compared to only 51 percent of those without. Although these differences were not statistically significant, LHFP participants with initial CJI also reported more illegal drug use at intake compared to their counterparts. These findings are consistent with those of

prior studies that have found higher rates of alcohol and illegal drug use among individuals with criminal justice involvement (Freudenberg, 2001; Geller & Curtis, 2011; Hammett et al., 2001; Jones & Sawyer, 2019; Kushel et al., 2005). Among individuals with a history of chronic homelessness who also suffer from a mental health disorder, substance abuse has been shown to increase the risk of housing instability, homelessness, physical and mental health problems, and criminal justice involvement (Drake et al., 2006; Padgett et al., 2011).

The higher rates of substance use among those with criminal justice involvement may be due to inadequate substance abuse treatment in prisons and jails, the financial burden of mandatory treatment programs for those subject to probation or parole supervision, and the barriers faced more generally by those with criminal justice involvement, who are less likely to have health insurance (CoH, 2015; Jones & Sawyer, 2019; Lin, 2010; Logan & Wright, 2014; Mallik-Kane & Visher, 2008). Mallik-Kane and Visher (2008) examined the experiences of state prisoners who were returning to large metropolitan cities upon release and determined that substance abuse and other health conditions were associated with poor reentry outcomes. The authors found that four out of five released inmates had at least one chronic health condition (i.e., physical or mental condition or substance abuse disorder), only half of those who needed substance abuse treatment received it while incarcerated, and more than 70 percent did not have health insurance upon release.

Individuals released on parole, as well as those under probation supervision, are often required to submit to drug testing and participate in substance abuse treatment programs, if deemed necessary by their officer, and failure to pay for any required aspect

of supervision can result in incarceration[11] (CoH, 2015; Lin, 2010; Logan & Wright, 2014). Substance abuse treatment programs are commonly offered as an alternative to incarceration for first-time drug offenders (i.e., diversion), but in order to avoid incarceration, the individual must be able to pay for the mandated drug treatment program (Logan & Wright, 2014). These economic barriers to treatment constitute one aspect of what Wacquant (2009) termed the "racialized penalization of poverty" (p. 75) and provide evidence supporting his assertion that "the ideal of rehabilitation [in the criminal justice system] has been abandoned or drastically downgraded, making retribution and neutralization the main practical rationale" of punishment (p. 77).

Indeed, LHFP participants with criminal justice involvement also generally reported more substance use at six, 12, and 18 months. At six months, participants with initial CJI were more likely to report and engaged in more mean days of alcohol use compared to their counterparts; this was true of LHFP participants who reported arrest, incarceration, or awaiting trial or sentencing at intake but not those subject to probation or parole supervision. In fact, no differences with respect to alcohol or illegal drug use were found at intake or at six, 12, 18, or 24 months between participants who were and were not subject to probation or parole supervision at intake. This suggests that individuals subject to community supervision may modify their behavior as a result of the restrictions placed on them by the criminal justice system. However, these individuals were also less likely to have a successful program outcome at 12, 18, and 24 months and

[11] Individuals under community supervision can also be incarcerated for noncriminal violations of the terms of their supervision, which are often out of their control, such as losing a job, not having a place to live, failing an alcohol or drug test, or missing an appointment with their officer (Harding et al., 2013; Lin, 2010; Rhine, 2009; Wacquant, 2010). The CoH (2015) points out that homeless probationers and parolees often fail to meet supervision requirements "that are designed for housed people" and "pose insurmountable challenges in the absence of re-entry support" (p. 53).

less likely to remain housed at 24 months. These findings potentially contradict the popular notion that supervisory restrictions are meant to ensure successful reintegration into society, while lending support to the idea that "ostensibly more humanistic forms of punishment further entrench and extend the long reach of the carceral state into the everyday lives of the racialized poor" (Bonds, 2019, p. 580).

At 24 months, no differences were observed with respect to alcohol or illegal drug use between LHFP participants with criminal justice involvement and those without. This is consistent with prior studies, which have found that HF may reduce substance use among participants (Collins et al., 2012; Larimer et al., 2009; Padgett et al., 2011; Tsemberis et al., 2012). Padgett and colleagues (2011) compared experiences of individuals with histories of chronic homelessness and mental health disorders who participated in either a HF or treatment first program and found that exposure to HF was associated with lower levels of substance abuse and higher levels of housing stability. The present study found that, despite improvements related to alcohol and illegal drug use in later intervals of program exposure, LHFP participants with criminal justice involvement were less likely to remain housed at 24 months compared to those without criminal justice involvement.

LHFP participants without criminal justice involvement had a retention rate closer to the 80 percent found among HF participants with a history of chronic homelessness and comorbid mental health and/or substance abuse disorder by Tsemberis and colleagues (2004), while those with criminal justice involvement had a retention rate under 50 percent. This lends further credence to the idea that this population faces unique obstacles to remaining housed and, therefore, may have additional and unique needs that

should be addressed. Accordingly, people with criminal justice involvement should be encouraged to seek treatment, particularly at earlier intervals when they are more likely to report substance abuse. The improvements observed with respect to substance use, as well as mental health, among LHFP participants with criminal histories lend further support to the notion that criminal justice involvement should be considered an indicator of need, rather than a reason to exclude people who need help from receiving housing assistance.

Criminal Behavior

Upon entering LHFP, participants with initial CJI were more likely to report and engaged in more instances of criminal behavior compared to those without initial CJI; this was true of LHFP participants who reported arrest, incarceration, or awaiting trial or sentencing at intake but not those subject to probation or parole supervision. These findings are consistent with prior studies, which have found that individuals with criminal justice involvement are more likely to engage in subsequent criminal activity (Langan & Levin, 2002; cf. Kurlychek, Brame, & Bushway, 2006, 2007) and may explain why some advocate for excluding individuals with criminal justice involvement from housing assistance programs (McCarty et al., 2016). It is possible, however, that these findings can be partly attributed to the increased surveillance of individuals who have had prior contact with the criminal justice system (Brayne, 2014; Hartwell, 2004; Hinton et al., 2018). Brayne (2014) asserted that individuals with criminal justice involvement engage in "system avoidance" (i.e., avoiding contact with any institution that facilitates social control through formal recordkeeping and data sharing), which serves to disconnect "an

already marginalized subpopulation from institutions that are pivotal to desistance from crime and their own integration into broader society" (p. 367).

Moreover, it may be that the confluence of several factors, including formal and informal collateral consequences, higher rates of mental health and substance abuse disorders, and the negative, long-term impacts of homelessness, serves to outweigh any improvements gained from access to stable housing (Bennett, 2017; Gowan, 2002; Hartwell, 2004; Travis, 2002; Western, Kling, & Weiman, 2001). Gowan (2002) identified "a homelessness/incarceration cycle more powerful than the sum of its parts, a racialized exclusion/punishment nexus which germinates, isolates, and perpetuates lower-class male marginality" (p. 500). More so than their counterparts who are not burdened with the stigmatization attached to a criminal record, individuals with a history of criminal justice involvement struggle to obtain employment and adequate income (Kurlychek et al., 2007) and may be induced to turn to illegal activity in the face of limited options (Freeman, 1996; Gowan, 2002; Kurlychek et al., 2006). Herbert and colleagues (2015) noted that recipients of housing assistance who have a criminal record may be more likely to face limited housing choices and end up in neighborhoods with higher rates of poverty, characterized by "fewer opportunities for employment and more of a risk for criminal involvement" (p. 22). As a consideration of the neighborhood effects was beyond the scope of the present study, future research should examine the ways in which criminal justice involvement impacts housing choices among those receiving housing assistance (Kubrin & Stewart, 2006; Kubrin, Squires, & Stewart, 2007).

As was observed with respect to substance use, no differences were found with respect to reported engagement in criminal behavior at intake or at six, 12, 18, or 24 months between participants who were and were not subject to probation or parole supervision at intake. These findings offer further evidence that restrictive supervisory requirements for those on probation or parole may deter individuals from participating in unsanctioned activities, but this does not translate to advantages for the individual, at least with respect to housing outcomes. Herbert and colleagues (2015) linked housing stability to "features of community supervision, such as intermediate sanctions, returns to prison, and absconding" (p. 44) but also found that income served as a buffer to housing instability. While this indicates a potential way to mitigate the negative consequences of community supervision, it also demonstrates the disturbing relationship between criminal justice sanctions and economic marginalization. The fact that these individuals have a criminal record often severely limits their opportunities for economic advancement (Gowan, 2002; Kurlychek et al., 2007). This, in turn, may lead to housing instability (Barile et al., 2018; Doak, 2010; Glendening & Shinn, 2017; Roman & Travis, 2006), which makes it more likely that they will experience further difficulties with obtaining and maintaining employment (La Vigne et al., 2009; National Coalition for the Homeless, 2009; Poremski et al., 2015). At the same time, experiencing housing instability and unemployment increases the likelihood that an individual will reoffend (Herbert et al., 2015; Lutze et al., 2014; Metraux & Culhane, 2004). If the goal of supervision is to reintegrate the individual into society and protect the community, ensuring access to affordable and stable housing for those with criminal justice involvement should be a priority for policymakers, service providers, and communities.

In line with previous studies, which have found that increased access to stable housing reduces recidivism (Fischer et al., 2008; Lutze et al., 2014; O'Connell, Kasprow, & Rosenheck, 2008), the present study found that, although differences existed at intake, LHFP participants with criminal justice involvement were not more likely to report and did not report engaging in more instances of criminal behavior, on average, compared to their counterparts without criminal justice involvement at 18 and 24 months. This is also consistent with studies that suggest exposure to PSH, including HF, may reduce recidivism rates among those with criminal justice involvement (Clifasefi et al., 2013; DeSilva, Manworren, & Targonski, 2011; Hanratty, 2011; Padgett et al., 2011; Somers et al., 2013). Given the importance of housing in reducing the likelihood that an individual will reoffend (Metraux & Culhane, 2004; Roman & Travis, 2006; Travis, Solomon, & Waul, 2001), access to affordable and stable housing is crucial not only for the wellbeing and success of those with criminal justice involvement but also for the communities in which they reside. This lends further support to the argument that criminal justice involvement should be considered an indicator of need, rather than a reason to exclude individuals with criminal histories.

These findings indicate that public safety and recidivism reduction arguments underlying prohibitions against people with criminal records receiving housing assistance may be unfounded, especially for those who are stably housed. When given access and time to acclimate to stable housing and offered supportive services, participants with criminal justice involvement were no more likely to engage in criminal behavior than those without prior criminal justice contact. Despite these improvements, in addition to those observed with respect to mental health and substance use, LHFP participants with

criminal justice involvement were less likely to remain housed and less likely to have a successful program outcome at 24 months compared to those without criminal justice involvement. Indeed, initial CJI among LHFP participants was a predictor of housing instability and program failure at 24 months.

Criminal Justice Involvement and Critical Race Theory

Criminal justice involvement as an influencing factor on residential instability and LHFP failure at 24 months may be due to the fact that, for those with criminal justice involvement, "homelessness reinforces social marginalization, unemployment, alienation, and criminal status" (Gowan, 2002, p. 529), creating long-term institutional and structural disadvantages that cannot be quickly overcome, even if stably housed. In this way, the systematic persecution of individuals with criminal justice involvement resembles and can be seen as an extension of the racial subordination described by critical race theorists. The criminal justice system is an important mechanism of racial subordination, through which supposedly race-neutral laws and policies marginalize people of color while masking inequality (Capers, 2014). Indeed, as Alexander (2010) observed, "More African-Americans are under correctional control today—in prison or jail, on probation or parole—than were enslaved in 1850, a decade before the Civil War began" (p. 173), but many have argued that this disproportionality is not due to racial bias (see Armour, 1994 for a discussion of racial bias in the justice system).

Ignoring the realities of structural racism in favor of a colorblind perspective is, in itself, an act of racism, according to Bell (1973), Bonilla-Silva (2006), and other critical race scholars (Aviles de Bradley, 2015). Students of criminal justice are commonly taught that the origins of policing in America can be traced back to England (Archbold, 2012);

while this is not untrue, it does not tell the entire story. Beginning in the early 18th century, policing was used as a tool of racial subordination in the form of night watches and slave patrols, which served to protect white colonists from Native Americans, to control slave workers, and, ultimately, to maintain white supremacy (Cooper, 2015; Kappeler, 2014; Moore et al., 2018; Robinson, 2017). Race has been embedded in the structure of the American criminal justice system since the first colonists arrived: "The death of unarmed Black men at the hands of law enforcement in the United States... can be traced back as early as 1619" with the arrival of the first slave ship in Virginia (Robinson, 2017, p. 552; see also Hannah-Jones, 2019); the largest police force in the U.S. in 1837 was a slave patrol in Charleston, South Carolina (Moore et al., 2018); and the St. Louis police department was established to protect white citizens from Native Americans (Kappeler, 2014). By placing our modern criminal justice system in historical context, for example, recent efforts to disenfranchise people of color through disproportionate minority contact and mass incarceration can be seen as an evolution of Black Codes, which criminalized blackness and took the place of Slave Codes (Cooper, 2015; Hinton et al., 2018; Moore et al., 2018), rather than "the unfortunate result of disproportionate Black and Latino participation in crime"[12] (Brewer & Heitzeg, 2008, p. 629).

Long after the Civil War, the criminal justice system continued to facilitate racial subordination through the enforcement of Jim Crow laws, which were designed to deny freed slaves the privileges associated with citizenship (Potter, 2013). More recently, Go (2020) tied the modern militarization of the police to colonialism, which "generated novel modes of coercion and other methods of social control" (p. 1212), methods which

[12] According to Brewer and Heitzeg (2008), this is the rationale advanced by proponents of the color-blindness argument.

are employed by contemporary police departments to "manage perceived threats to social order from racialized minority populations" (p. 1197). Numerous works have demonstrated the ways in which the criminal justice system has facilitated racial subordination and perpetuated structural inequality and white supremacy (Alexander, 2010; Baldus, Woodworth, & Pulaski, 1990; Chaney & Robertson, 2015; Clayton, 2020; Kurlychek & Washington, 2017). Lin (2010) considered disparities in parole revocations for those who violated the terms of their supervision and found higher reincarceration rates among males and minority parolees. Kurlychek and Washington (2017) observed racial disparities in decisions regarding whether or not to seal criminal records resulting from the disproportionate arrest of minorities in New York City. A sealed criminal record attempts to shield an individual from the harmful collateral consequences of criminal justice involvement by making them inaccessible to the public and most agencies, while visible records "further amplify inequalities in employment, income, housing, and other postrelease outcomes" (Kurlychek & Johnson, 2019, p. 304).

The war on drugs provides further examples of racial subordination working through the structures of the criminal justice system. Disparities in federal law regarding possession of crack and powder cocaine is illustrative of institutionalized racial bias: under the "100-to-1 rule,"[13] an individual in possession of 50 grams of crack cocaine would receive the same mandatory sentence as someone in possession of 100 times the amount of powder cocaine (Brooks, 2008, p. 275; see also Clayton, 2020; Kurlychek & Johnson, 2019). Although crack and powder cocaine have chemically identical effects

[13] The 100-to-1 rule was repealed in 2010 when President Obama signed the Fair Sentencing Act (Hinton et al., 2018), but several states continued to enforce disparate sentences for crack and powder cocaine (Porter & Wright, 2011).

once absorbed into the bloodstream, and crack cocaine users are more likely to be white, African Americans accounted for 80 percent of those incarcerated for crack cocaine offenses (Porter & Wright, 2011). Critical race theorists also point to the enormous financial cost associated with the war on drugs, which disproportionately impacted people of color, in contrast to that of rehabilitation, which has been shown to be a more effective solution to the problem of substance abuse than punishment (Delgado & Stefancic, 2007).

Criminalization of Poverty

According to critical race theory, "the problem is not simply that crime is racialized…it is also that race is criminalized… This dialectical relationship between race and crime…leads to the idea that being black is a crime in itself" (Carbado & Roithmayr, 2014, p. 152). The "criminalization of poverty," for example, has been criticized as perpetuating the marginalization of the homeless, who are disproportionately people of color, and reinforcing racial inequality (Wacquant, 2010, p. 186; see also Darrah-Okike et al., 2018; NLCHP, 2019). Simply being homeless can lead to incarceration for some on probation or parole (Lin, 2010; Rhine, 2009), and many cities have criminalized activities necessary for human survival, such as urinating, sleeping, and eating, in public (Rankin, 2019; Robinson, 2019). Critical race theory points to these disparities as evidence of structural inequality; "thousands of seemingly unconnected acts may add up to glaring racial unfairness" (Delgado & Stefancic, 2007, p. 142), which makes it more difficult to identify the structures of racial subordination embedded in our institutions (i.e., education, criminal justice, social welfare).

People of color and the economically marginalized are more likely to come into contact with the criminal justice system and often have worse outcomes as a direct result of their marginalized status (Zaw, Hamilton, & Darity, 2016). Subsequently, their criminal justice involvement negatively impacts future efforts to escape poverty (Craigie, Grawert, & Kimble, 2020). The average *annual* loss of wages attributed to criminal justice involvement[14] is over $370 billion, and because people of color are overrepresented among those who come into contact with the criminal justice system, these lost earnings perpetuate racial inequality (Craigie et al., 2020; Harris, Evans, & Beckett, 2010; Logan & Wright, 2014). In fact, Craigie and colleagues (2020) found that white men and women *with* criminal justice involvement earned more than their African American counterparts *without* such involvement and concluded that "the staggering racial disparities in our criminal justice system flow directly into economic inequality" (p. 6).

Above and beyond an offender's duty to pay their "debt to society," there are numerous costs associated with criminal justice involvement, referred to as "legal financial obligations" or LFOs (Logan & Wright, 2014, p. 1177; see also Harris et al., 2010). These LFOs have been criticized as an undue burden on the often already economically disadvantaged people who are more likely to come into contact with the criminal justice system (Beckett & Herbert, 2011; Harris et al., 2010; Wacquant, 2010), an obstacle to successful reentry (Bannon, Nagrecha, & Diller, 2010), and a driver of racial

[14] This figure includes only the loss of wages resulting from imprisonment, misdemeanor conviction, or felony conviction. It does not include earnings lost due to criminal charges, arrest, or incarceration in jail. It also does not include "secondary costs of involvement in the criminal justice system, such as the earnings lost to a family when a parent must leave a job to care for a child during a partner's incarceration, transportation costs..., money sent to commissary accounts or spent on phone and video calls, ...court costs and criminal justice debt, or ... a private attorney, to name just a few" (Craigie et al., 2020, p. 7).

inequality (Logan & Wright, 2014). By tying an individual's criminal justice outcomes to their economic status, LFOs penalize and perpetuate poverty and inequality among marginalized groups who are more likely to have criminal justice involvement (Harris et al., 2010; Logan & Wright, 2014; Wacquant, 2010).

Many cities rely heavily on the funds generated by the criminal justice system (Ghandnoosh, 2015), and the commodification of punishment can be seen at every stage of the criminal justice system. Before being found guilty of any crime, individuals encountering the criminal justice system frequently face numerous costs, and their outcomes (e.g., whether they are charged, tried, convicted, incarcerated, etc. or not) are often directly related to their economic status (Logan & Wright, 2014). Logan and Wright (2014) argued that LFOs encountered by suspects in earlier stages of the criminal justice system, such as booking fees, laboratory fees stemming from drug-related offenses, fees related to pre-trial diversion and substance abuse treatment, pre-trial abatement fees, and bail, "threaten the presumption of innocence" (p. 1178). Many of those charged with minor offenses are incarcerated in jails[15] simply because they do not have enough money to pay bail, and individuals experiencing homelessness and people of color are more likely to be incarcerated due to inability to pay (CoH, 2015). In addition to extending the length of their pre-trial incarceration (assuming the charges are not dismissed), individuals who are unable to make bail are more likely to be found guilty, more likely to be sentenced to incarceration, and less likely to have felony charges reduced to misdemeanors, and those detained receive and serve longer sentences than those who are able to afford bail (Baradaran & McIntyre, 2012; Jones, 2013; Sacks & Ackerman, 2012;

[15] Most of those detained in jails (75%) have not been found guilty of the crime for which they are detained (Sawyer & Wagner, 2020).

Schlesinger, 2007). In some cases, a defendant can pay a pre-trial abatement fee to "resolve the case without a conviction," and their criminal record remains unblemished (Logan & Wright, 2014, p. 1189).

Individuals should not be punished due to a lack of financial resources or, conversely, rewarded because they are more fortunate than others. Moreover, when the enormous costs of the criminal justice system rely on self-generated revenue, "criminal justice actors become mercenaries, in effect working on commission" (Logan & Wright, 2014, p. 1177), and "every potential arrestee becomes a potential source of revenue" (p. 1212). To ensure both the neutrality of criminal justice actors and the most basic protections afforded to criminal suspects, courts, police departments, and correctional institutions should not be responsible for generating revenue.

Cost and (In)Effectiveness

In addition to the numerous costs often borne by those who become involved in the criminal justice system, American taxpayers spend an inordinate amount of money to incarcerate and otherwise punish marginalized groups (Black et al., 2019; Mitchell & Leachman, 2014; Wacquant, 2009). In some states, criminal justice spending has outpaced that of education (Mitchell & Leachman, 2014). Housing the nearly 80,000 individuals held in solitary confinement alone costs an estimated $60 billion a year (Black et al., 2019), and between 1980 and 2007, criminal justice expenditures increased from $33 billion to $216 billion (Wacquant, 2009). Probation and parole revocations for technical (i.e., noncriminal) violations account for over one-third of all prison admissions in the U.S. (ACLU, 2011); the high rate of recidivism among probationers and parolees may be due to the wide range of criminal and noncriminal activities that can result in the

revocation of their parole and the extended amount of time they are subject to supervision requirements. Mitchell and Leachman (2014) concluded that, "if states were still spending on corrections what they spent in the mid-1980s, adjusted for inflation," each state would have $28 billion more to spend on critical services, such as education, health care, and housing (p. 1).

Punitive approaches are generally more expensive than rehabilitation, but proponents argue that these costs are necessary to deter criminal behavior and protect our communities (Lipsey & Cullen, 2007). However, the expansion of the criminal justice system and adoption of increasingly punitive policies have not reduced crime or addressed its underlying problems (Baughman, 2020). Recent calls to "defund the police" reflect the fact that the vast majority of reported crimes (98%) are not solved, which Baughman (2020) likened to "the fire department…only putting out…two out of every 100 fires" (p. 106). Given the enormous costs associated with the criminal justice system, it is surprisingly ineffective in reducing recidivism (Clement, Schwarzfeld, & Thompson, 2011; Durose, Cooper, & Snyder, 2014; Gramlich, 2017; Lipsey & Cullen, 2007; Pettus-Davis & Epperson, 2014). Durose and colleagues (2014) found that nearly 77 percent of those released from prison were rearrested within five years, and as Pettus-Davis and Epperson (2014) noted, "failure rates this high are not tolerated in any other social interventions" (p. 3). Between 2000 and 2007, New York State's incarceration rate fell 16 percent, while Florida's rose 16 percent; although correctional spending increased in Florida during this time, New York experienced twice the reduction in its crime rate (Clement et al., 2011). Lipsey and Cullen (2007) reviewed meta-analyses focusing on the effectiveness of punitive versus rehabilitative approaches to reducing recidivism and

found that "supervision and sanctions, at best, show modest reductions in recidivism and, in some instances, have the opposite effect and increase reoffense rates" (p. 297).

Rather than punishing undesirable behavior, which is often expensive and ineffective, contemporary scholars generally conclude that substance abuse and mental health treatment and other supportive services should be expanded and made more accessible to those who need it most, regardless of criminal history (Jones & Sawyer, 2019; Lipsey & Cullen, 2007; Parson, Wei, Henrichson, Drucker, & Trone, 2015). Punitive sanctions often fail to have their desired effect, but "the mean recidivism effects found in studies of rehabilitation treatment, by comparison, are consistently positive and relatively large" (Lipsey & Cullen, 2007, p. 297). Jones and Sawyer (2019) found that community mental health and substance abuse treatment programs reduced crime, incarceration, and health care expenses. Parsons and colleagues (2015) found that the elimination of mandatory minimum sentences for drug-related offenses in New York State, when paired with increased access to treatment as an alternative to incarceration, reduced recidivism and racial disparities in sentencing. Vogler (2020) found that Medicaid expansion following the passage of the Affordable Care Act decreased annual crime rates by three percent, saving $13 billion annually.

While research and public debate often focus on the effectiveness and financial cost of crime reduction strategies, consideration of the costs and benefits of various criminal justice interventions should also take into account their *social costs* (Pfaff, 2020; Vogler, 2020), including reduced civic engagement resulting from disenfranchisement (Drake, 2011; Marable, 2006; Travis, 2002), the loss of wages resulting from even minor criminal justice involvement (Craigie et al., 2020; Harris et al., 2010), and the

fragmentation of countless families and communities (Wacquant, 2009, 2010). People of color disproportionately bear these costs, which Anderson (2012) estimated at $1.2 trillion annually.

Applying Critical Race Theory

By exposing the inherent inequities and failures of the criminal justice system, the critical race theory framework may provide important context for understanding the findings of the present study. Mental health, substance use, and criminal behavior disparities identified in the bivariate analyses support the notion that those with criminal justice involvement are often at a disadvantage when compared to their counterparts. These disparities are evident at intake and at earlier intervals of program exposure, which may indicate that, given access to stable housing and supportive services and time to adjust, individuals with criminal justice involvement ultimately benefit from housing assistance. Multivariate models also showed that individuals with criminal justice involvement were at a disadvantage in terms of housing outcomes, as they were more likely to experience residential instability and program failure at 24 months. Overall, individual demographic factors (i.e., race, gender) were not significant predictors of housing outcomes among LHFP participants, which is consistent with prior studies that have found "observable features of low-income families [to be] weak predictors of future housing instability" (Glendening & Shinn, 2017, p. 322; see also Brown, Vaclavik, Watson, & Wilka, 2017; O'Flaherty, 2010; Shinn, Baumohl, & Hopper, 2001). Education, age, and initial CJI were significant predictors of housing stability and program success at 24 months. Likewise, social support was a significant predictor of housing stability at 24 months among LHFP participants. Rather than indicators of individual attributes, critical

race theory suggests that these structural predictors may reflect the inequality embedded in the institutions and structure of society, namely the educational and criminal justice systems and the economy.

Ironically, recent efforts to ban critical race theory in classrooms across America have brought increased attention to the ways in which structural inequality perpetuates the oppression of people of color and other marginalized groups and highlight the absurdity of the colorblindness argument (Ford, 2020; Settles-Tidwell et al., 2021). Given numerous disparate outcomes in health (Ford, 2020; Ford & Airhihenbuwa, 2010), education (Aviles de Bradley, 2015; Clayton, 2020), employment and income (Clark, 2016; Pager, 2003; Pager & Shepherd, 2008), housing (Aguirre & Martinez, 2014; Olivet et al., 2021), and criminal justice (Alexander, 2010; Austin, 2008), the argument that race does not matter seems untenable. Marable (2006) identified mass unemployment, mass incarceration, and mass disenfranchisement as crucial structures of oppression, which interact to create "an ever-widening circle of social disadvantage, poverty, and civil death, touching the lives of tens of millions" in the U.S. alone (para. 4).

Indeed, recent events have emphasized the importance of increasing awareness about these systems of oppression and subordination (e.g., the criminal justice system) designed to further disadvantage the economically marginalized and people of color. Four hundred years after the arrival of the first slave ships on American shores (Hannah-Jones, 2019) and 100 years after the Tulsa Race Massacre, the nation is grappling with the characterization of those protesting racially motivated police brutality as "violent" rioters (Scepanski, 2020; Thusi, 2020). The "Trump administration's legitimizing of white supremacy," Settles-Tidwell and colleagues (2021) argued, "culminated in a white-

supremacist led insurrection on the Capitol" (p. 1; see also Simon, 2021). Given the realities of race in the U.S., critical race theory can expand knowledge and awareness about the structural inequalities faced by people of color and other marginalized groups, including those with criminal justice involvement. The adoption of a critical race theory perspective can inform policymakers and the general public about how to address racial disparities, such as those found in the criminal justice system and in the allocation of public assistance. By "collaboratively confronting our past, grappling with our present, and building a truly equitable future for our nation" (Settles-Tidwell et al., 2021, p. 7), critical race theory has the potential to improve the lives of all Americans.

Limitations

The present study found that LHFP participants with criminal justice involvement differed from those without criminal justice involvement, but these findings are not without their limitations. Because HF targets those considered difficult to serve, the findings of the present study cannot be generalized to all individuals experiencing homelessness (Dennis et al., 2007). Specifically, the findings of the present study may or may not extend to individuals who participate in different HF programs, or housing assistance programs more generally, in different geographic areas. At the same time, these findings may or may not apply to individuals who do not have a history of chronic homelessness and co-occurring mental health and/or substance abuse disorder, as these were the inclusion criteria for enrollment in LHFP. In addition, LHFP participants who did not complete an intake interview, were not placed in housing, or entered the program more than once were excluded from the analyses, and it is possible that their experiences and outcomes may be different from those of participants who were included in the

present study. Data regarding demographics, mental health conditions, risky behavior, and criminal justice involvement were self-reported and not verified independently by the researcher.

Additional limitations, which have been identified in prior examinations of HF (Alfonso & Weinstein, 2020; O'Campo et al., 2016; Somers, Moniruzzaman, & Palepu, 2015), include the attrition rate and missing data. The problem of attrition, or mortality, refers to participants who dropped out or were not included in successive waves of data collection. It is possible that the attrition rate of LHFP participants can be attributed to underlying factors that were not considered in the present study. Indeed, attrition is not unusual in studies examining the experiences of participants in HF programs, who often have histories of mental health conditions, substance abuse, and criminal justice involvement (Alfonso & Weinstein, 2020; O'Campo et al., 2016; Somers et al., 2015).

Although social support was found to be a significant predictor of housing stability at 24 months, no information was available regarding the nature of this social support (i.e., bridging vs. bonding). Likewise, data regarding participant experiences with homelessness, mental health, and risky behavior prior to enrollment in the program were not available[16]. Time spent homeless prior to placement in assisted housing has been found to influence housing, health, and criminal justice outcomes (Fischer et al., 2008; Gonzalez et al., 2018; Jaworsky et al., 2016), and a comprehensive examination of the effects of HF on mental health and substance abuse should also consider lifetime trajectories of mental health and substance abuse. Some participants died while housed

[16] The CSAT-GPRA data included measures of mental health and risky behavior for the 30 days prior to intake, but no earlier information was collected.

through LHFP, but the researcher did not have access to data regarding the causes or circumstances of these deaths.

No information was available regarding the nature of criminal justice involvement (e.g., offense type, time elapsed since charged/convicted/released) of LHFP participants, but as Vallas and Dietrich (2014) noted, "having even a minor criminal history now carries lifelong barriers that can block successful re-entry and participation in society" (p. 1). The present study utilized a binary measure of race, designating nonwhite as the reference category to critically examine the ways in which whiteness confers advantages on those perceived to be white (Guess, 2006). This categorical coding, which attempts to capture multiple attributes (i.e., ethnicity, skin color, nationality) within simplified groupings, may explain why race was not a significant predictor of housing outcomes. Future research should consider incorporating qualitative methods (Henne & Shah, 2015) and alternative coding schemes (Lopez, Erwin, Binder, & Chavez, 2017; Mayhew & Simonoff, 2015), which are better suited to examining the nuances of racial identity, endeavors beyond the scope of this exploratory study.

Conclusions

Ultimately, policies that result in increased housing instability for individuals with criminal justice involvement seem to be counterproductive and costly. The millions of Americans with criminal records and the racial disparities evident in the criminal justice system may challenge normative expectations of neutrality, fairness, and culpability. If our criminal justice system disproportionately and unfairly impacts people of color, criminal justice involvement more likely reflects the prevailing values of our society as opposed to the character of the individuals targeted by these biased practices. Rather than

excluding individuals from housing assistance and other opportunities on the basis of their criminal justice involvement, such histories should be considered potential indicators of need, given the disparities in mental health, substance abuse, criminal behavior, and housing outcomes found in this population. Given the findings of the present study, legislators, program administrators, service providers, case managers, and community members should consider prioritizing programs that adopt HF principles, as well as supportive services, and encourage social support for those with criminal justice involvement to help offset the challenges they face. In this way, the provision of housing assistance can more effectively and fairly serve and improve the lives of the most marginalized members of our cities, states, and nation.

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PUBLICATIONS

Denton, A. N. (2019). Bedford Hills Correctional Facility. In F. P. Bernat, K. Frailing, L. Gelsthorpe, S. Kethineni, & L. Pasko (Eds.), *The Encyclopedia of Women and Crime*. Hoboken, NJ: Wiley-Blackwell.

Denton, A. N., & Connor, D. P. (2017). Alternative schools. In C. J. Schreck (Ed.), *The Encyclopedia of Juvenile Delinquency and Justice*. Hoboken, NJ: Wiley-Blackwell.

Connor, D. P., & Denton, A. N. (2017). Clemmer, Donald. In K. R. Kerley (Ed.), *The Encyclopedia of Corrections*. Hoboken, NJ: Wiley-Blackwell.

Connor, D. P., & Denton, A. N. (2015). Public sentiment immediately preceding the passage of a sex offender law. *Critical Issues in Justice and Politics, 8*(2), 27-50.

PRESENTATIONS

Denton, A. N., & Dawson-Edwards, B. C. (March 2015). *Implementing and evaluating restorative circles in alternative schools*. Paper presented at the annual meeting of the Academy of Criminal Justice Sciences, Orlando, FL.

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