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Locked Out and Locked Up: Assessing the Relationship Between Housing Instability and Recidivism for People with Criminal Drug Records Using a General Strain Theory Framework

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Abstract

More than 32.5 million Americans have been arrested for drug offenses since 1996 contributing to the fact that currently nearly as many Americans have a criminal record as a college degree. After an arrest for a drug offense, often regardless of whether one is convicted, people are subject to civil penalties known as collateral sanctions. These sanctions include restrictions on access to subsidized housing, financial benefits, student loans, employment, and important aspects of civic life such as voting or holding office.

Due to recent recidivism rates - over 75% for people exiting prison with a drug record - researchers and policymakers have expressed concern about a connection between collateral sanctions and recidivism for people with criminal drug records (PCDR). There is enough concern regarding collateral sanctions in general that every state has passed some form of legislation to reduce their impact since 2012.

Research suggests that access to housing is frequently cited as one of the biggest concerns of people exiting prison and that it plays a protective role against problematic drug use, criminal behavior, and recidivism in general. Yet little is known about the specific experiences of PCDR or if these same relationships apply for this population. Given PCDR face unique restrictions on access to public housing along with legal discrimination in market-based housing, knowing more about how housing impacts outcomes like recidivism for this population is crucial.

Using data from the Fragile Families Study, this study incorporates both regression models and complex path models, using variables based on a General Strain Theory framework, to provide a robust test of the relationship between housing instability and recidivism for PCDR.

Results suggest that housing instability is associated with recidivism for PCDR. There is some evidence that supports the use of General Strain Theory as a guiding framework for better understanding the experiences of PCDR, as informal social control - in the form of employment, education, volunteerism, and supportive personal relationships - is associated with a decrease in recidivism. These results suggest that current policy efforts aimed at reducing barriers to housing and employment for PCDR should be beneficial to this population. Suggestions for future research concerning PCDR at both the individual and policy levels are discussed.

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Chapter 1: Introduction

1.1 Problem Statement

Over the past 30 years, the number of people incarcerated in the U.S. has increased by over 600%, resulting in more than two million people locked up on any given day in federal and state prisons (Bureau of Justice Statistics [BJS], 2015; Sabol & West, 2010). Moreover, estimates are that 24 million people cycle through local jails while seven million more are under public supervision through probation or parole (Glaze, Bonczar, & Zhang, 2010; Sabol & West, 2010).

Much of the increase in prison and jail populations is due to the rise of punitive practices in drug control policy during this time (Alexander, 2012; Hari, 2015). In 1980, about 40,000 people spent time in jail or prison nationwide for drug offenses. By 2013, that number rose to upwards of 500,000, which represented nearly 25% of all people incarcerated in the U.S. (The Sentencing Project [SP], 2015). Arrests for drug crimes have also skyrocketed, with over 1.6 million people arrested in 2017 alone, which represents a high point in the last seven years. Notably, these arrests are predominantly and consistently concentrated among low-level dealers and users: nearly 1.4 million (85%) were for simple drug possession while less than 250,000 (15%) were for drug manufacture or distribution (Drug War Facts [DWF], 2019).

Over 95% of those who enter jails and prisons are eventually released (Petersilia, 2003; Pettus-Davis, 2014). As early as 1999, people with drug offenses made up the largest percentage (33%) of incarcerated people released each year (Roman & Travis, 2004). Given that nearly 700,000 people are released from state and federal prisons each year (Carson, 2015), at least 230,000 people return to their communities with a drug conviction on their record each year along with millions of others arrested for drug offenses. Overall, more than 32.5 million people have been arrested for a drug offense in the U.S. since 1996 suggesting that large swaths of the population have criminal drug records (DWF, 2019).

Collateral Sanctions & People with Criminal Drug Records

People with criminal drug records (PCDR) face serious social and economic consequences known as "collateral sanctions" or collateral consequences (Boire, 2007; LAC, 2009, 2004; Love & Schlussel, 2019; Radice, 2012, pp. 717). These sanctions include restrictions on access to publicly subsidized housing, public financial benefits, student loans, and employment (Boire, 2007; Bushway & Sweeten, 2007; Evans & Porter, 2014; Henry & Jacobs, 2007; LAC, 2009, 2004; Roman & Travis, 2004). Collateral sanctions have been part of civil codes throughout modern history, but by the early part of the 21st century, they were more numerous than ever in the U.S. (Peterisilia, 2003). As of 2019, researchers had identified more than 40,000 restrictive statutes in state and federal law for people with criminal records with 6,315 specifically targeting PCDR (National Inventory of Collateral Consequences of Conviction [NICCC], 2019). Many of these policies were enacted during the 1980s and 1990s and coupled with mandatory

minimum sentences as added deterrents for use, possession, manufacture, and distribution of drugs (Alexander, 2012; Gill, 2008). Collateral sanctions are often referred to as "invisible" (Whittle, 2016, pp. 2) because they are mostly found in civil instead of criminal statutes. Also, due to the tens of thousands of sanctions in civil code throughout the U.S., many defense lawyers, prosecutors, juries, and judges are unaware of the sanctions that apply to a defendant at the time of sentencing (Whittle, 2016).

Disproportionate Impact of the War on Drugs in the United States

The issue of collateral sanctions is of particular interest to social work due to social work's historical focus on serving and improving the lives of marginalized populations. The disproportionate negative impact that drug policies have on the poor and people of color in the U.S. is well documented. These populations are consistently overrepresented among people arrested and convicted for drug crimes, and subsequently, among PCDR facing the obstacles to full social, civic, and economic participation in society presented by collateral sanctions (Alexander, 2012; Hari, 2015; Pettus-Davis, 2012; Piven & Cloward, 1993; Soss et al., 2011; Wacquant, 2009).

Questioning the Effectiveness of Punitive Policy

Due in large part to the use of criminal sanctions to deal with drug use and addiction in the U.S., about one out of every four Americans now has a criminal record with the rate being one out of every three for Black men (Alexander, 2012; Stauffer, 2016). In 2017, the FBI considered over 70 million adults in the U.S. to have a criminal record, indicating that a huge number of Americans are subject to collateral sanctions (Friedman, 2015). Even with so many people dealing with arrest, incarceration, and the

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permanent consequences of a criminal conviction, drug use and addiction continue unabated in the U.S. In fact, the country currently finds itself in the middle of drug overdose epidemic with a death toll of over 60,000 people in each of the last two years (Macy, 2018; Quinones, 2016; Scholl et al., 2019).

Outcomes for those who enter the criminal justice system paint a bleak picture as well. Post release, arrest, or conviction, collateral sanctions impact PCDR's ability to fully reintegrate or participate in society (LAC, 2009, 2004; Morazes & Pintak, 2007; Radice, 2012). As a result, scholars and legal organizations are expressing increasing concern about the connection between collateral sanctions and recidivism rates. (Boire, 2007; Bushway & Sweeten, 2007; Henry & Jacobs, 2007; LAC, 2009, 2004; Pager, 2003; Radice 2012; Whittle, 2016). Recent research found that in the first six months after release from prison, 37% of people with drug convictions were rearrested and 57% were rearrested within the first-year post release. Ultimately, the researchers found that within five years of being released from prison, 77% of people with drug convictions were rearrested (Durose, Cooper, & Snyder, 2014). These numbers suggest that individual and policy interventions are crucial for PCDR and that lengthy restrictions on access to important resources such as housing, employment, and public assistance may be counterproductive (Bushway & Sweeten, 2007; Whittle, 2016).

These concerns have started to translate into policy changes that specifically target collateral sanctions policies. In 2018, 32 states passed over 60 pieces of legislation aimed at reducing statutory barriers for people with criminal records. Little is known about the impact of these types of laws as they vary widely and many are yet to be

implemented (Love & Schlussel, 2019). However, preliminary research from Michigan on a new record expungement policy shows promising employment results for those who can clear their criminal record (Prescot & Starr, 2019). Again, these policy developments represent a growing recognition that collateral sanctions may be problematic for PCDR and others attempting to reintegrate or fully participate in society.

PCDR need to be able to divest from criminal behavior and reconnect to society in the most effective way possible, backed by evidence-based policy and practice. Therefore, it is important to clarify the effect of collateral sanctions on recidivism and other outcomes. Whittle (2016) notes that research on how collateral sanctions may be associated with outcomes for PCDR is limited and refers to it as a "glaring gap" (p.15). Access to housing is frequently cited as one of the biggest concerns of people exiting prison (Evans & Porter, 2014; Omaya, 2009, Thacher, 2005), and emerging literature suggests it plays a protective role against problematic drug use and recidivism (Clifasefi, Malone, & Collins, 2013; Lutze, Rosky, & Hamilton, 2014; Somers, Rezansoff, Moniruzzaman, Palepu, & Patterson, 2013; Wright, Zhang, Farabee, & Braatz, 2014). Given the fact that PCDR face restrictions on public housing along with legal discrimination in market-based housing (Evans & Porter, 2014; Radice 2012) knowing more about how access to housing impacts PCDR's social connections and recidivism rates is therefore crucial for researchers and policymakers alike (Whittle, 2016).

1.2 Purpose of the Study

The purpose of this study is to gain a preliminary understanding of what individual level factors are associated with recidivism for PCDR. Housing is the main

variable of concern due to its prevalence in the literature as an important factor for other

populations attempting to reintegrate into society. The main outcome is formal recidivism

(new arrests, charges, or convictions) which is a common indicator used in criminal

justice literature to measure whether people with criminal histories can reconnect to

society and divest from criminal behavior successfully. The study also draws from

General Strain Theory (GST) to develop and test variables connected to criminal

behavior in prior research on other populations. Thus, the following questions are

considered in this study: 1) Does housing affect recidivism for PCDR above and beyond

other theoretically criminogenic factors? 2) Is GST an appropriate framework for

understanding recidivism among PCDR? 3) Lastly, as many advocates often bemoan the

lack of research used in developing reintegration policy or criminal justice policy in

general (Love & Schlussel, 2019), what implications do the findings from this study have

for those seeking to reform collateral sanctions and reentry policy as it applies to PCDR?

      This study uses a quantitative approach, examining a secondary dataset to address

these questions. Ordinary least squares regression (OLS) and complex path models are

used to explore what individual level factors are associated with recidivism among

PCDR. The path models also allow for an exploration of the complex relationships

between variables proposed by GST, ultimately providing a more robust understanding of

its usefulness for understanding recidivism for PCDR.

      The study uses data from the Fragile Families Study made publicly available by

the Princeton University Office of Population Research Data Archive. This data set

includes a range of demographic and criminal history variables that allow for controls

based on the literature on housing's relationship to criminal behavior and drug use. Also, the items include variables that can represent all proposed criminogenic constructs from GST, which is rare in GST research. Furthermore, by incorporating tests of both mediation and moderated mediation using path models, this study provides a more precise statistical examination of the proposed relationships between variables in GST than is normally found in the literature. The testing of theory in this study contributes uniquely to the literature on the effect of housing on recidivism, especially specific to PCDR. This research has important implications for those working to reform collateral sanctions policies and engage in other reintegration efforts as it offers information specific to PCDR, while extending the current general understanding of the individual level factors associated with recidivism. The focus on housing is important as well as it provides advocates, policymakers, and practitioners with evidence for policy options that can target specific restrictions currently in place.

Chapter 2: U.S. Drug Control Policy & Collateral Sanctions

2.1 The Criminalization of Substances & Substance Use

Current U.S. drug policy is based on a prohibition model. Substances deemed illicit drugs are illegal to manufacture, distribute, possess or consume. These substances include heroin and cocaine (narcotics), methamphetamine, and marijuana. Being caught with any illicit drug can result in prison time and other criminal consequences depending on the quantity and the perceived intent to distribute them. However, this was not always case in the U.S.

Although general prohibition currently seems normal or ubiquitous, it is a fairly recent policy experiment. Much of the policy was built piecemeal during the first half of the 1900s, before a more cohesive set of policies was introduced in the 1970s and 80s. At the turn of the 20th century, there were no federal laws regarding which substances could or could not be consumed, manufactured, distributed or possessed. Many medicines available over the counter at the time included opiates and other narcotics such as cocaine and traveling salesmen frequently hocked cure-alls that included of mix of opiates and other unknown ingredients (Bonnie & Whitebread, 1999; Hari, 2015).

In 1906, the federal government, out of safety concerns due to investigative journalism by authors like Upton Sinclair, passed the Safe Food and Drug Act which required that all ingredients and their amounts be made explicit on labels, among other things. Warning labels were placed on products such as marijuana tincture and other

medicines containing narcotics that were deemed addictive or dangerous (Bonnie & Whitebread, 1999; Hari, 2015). This was not drug control policy per se, but consumers were now aware if the products they purchased contained any narcotics or other intoxicating ingredients. Even though this policy did not attempt to outlaw the use of drugs, it was indicative of growing concern – also evidenced by the temperance movement – regarding the consumption or over consumption of narcotics and intoxicating substances more generally (Bishop-Stall, 2018; Bonnie & Whitebread, 1999; Hari, 2015).

By 1914, the Harrison Narcotics Act was passed, bringing about the first time that drugs were made illegal federally in the U.S. This bill placed a hefty tax on prescriptions for narcotics that were once available over the counter. It made the use of narcotics illegal without a prescription, and the tax served as further impediment (Bonnie & Whitebread, 1999). Five years later, the prohibition of alcohol began in the U.S. with the passage of the Volstead Act and the 18th Amendment. While both laws did produce some initial decreases in drinking and narcotic use, they also had the unintended consequence of creating a bourgeoning black market of unregulated (and unlabeled) narcotics and alcohol along with a new category of criminal: drug offender (Bishop-Stall, 2018; Bonnie & Whitebread, 1999; Hari, 2015). Ultimately, prohibition of alcohol would be repealed in 1933; it was deemed a failure, and the black market it produced led to steep increases in violent and organized crime (Bishop-Stall, 2018; Hari, 2015).

However, narcotics remained illegal and marijuana would soon be added to the list of illegal substances. In 1937, congress passed the Marihuana Tax Act which required

people growing or selling marijuana products to apply for a tax stamp by providing authorities with detailed accounts of how they produced the product. The catch was that the law also made marijuana production illegal in the U.S. and applying for the stamp would amount to admitting guilt (Bonnie & Whitebread, 1999; Gill, 2008; Hari, 2015).

In 1951, Congress enacted what became known as the Boggs Act (Bonnie & Whitebread, 1999; Gill, 2008). This law ushered in the first use of mandatory minimum sentences in order to stop the spread of drug use, dealing, manufacturing and addiction in the U.S. This law mandated that those convicted of drug crimes should receive at least two to five years for a drug offence and did not stipulate any differences in sentencing between possession, dealing, trafficking, or production of drugs (Gill, 2008). In 1956, the Narcotics Control Act increased the mandatory minimum sentence for a first-time drug offence to five years in prison, with a subsequent offence resulting in a mandatory 10 years in prison, while at the same time removing all discretionary power from judges in sentencing (Bonnie & Whitebread, 1999; Gill, 2008). These policies remained intact until the early 1970s.

Some scholars suggest that the original basis for these punitive drug laws in the U.S. had little to do with any available evidence regarding the positive or negative impacts of drug use or the ability of these policies to deter drug use or distribution (Bonnie & Whitebread, 1999; Hari, 2015; Szalavitz, 2016). Bonnie and Whitebread (1999), Hari (2015), and Szalavitz (2016) argue that many of the policies passed in the 1910s and 1930s, which first made substances such as heroin, cocaine, and marijuana illegal, were based on commonly held and overtly racist fears of sexual integration

between races, along with myths of hyper criminality among people of color. Ultimately, they argue that these attitudes contributed to disproportionate enforcement of drug laws in communities of color. These disparities in enforcement would lead to disparities in incarceration, which would then be exacerbated by the war on drugs (Alexander, 2012; Hinton, 2016).

2.2 The War on Drugs

By 1970, drug use for all narcotics had increased, while use of marijuana became entrenched in youth culture and prevalent amongst middle- and upper-class youth – suggesting that mandatory minimums may not have the desired deterrent effect (Bonnie & Whitebread, 1999, 1970; Gill, 2008, Hari, 2015). In response, during the Nixon administration, Congress passed the Controlled Substances Act, prioritizing federal drug enforcement and starting the modern war on drugs. At the same time, Congress repealed the Boggs Act, ending mandatory minimum sentences, which had been deemed ineffective. Instead, they introduced the Comprehensive Drug Abuse Prevention and Control Act of 1970 (Bonnie & Whitebread, 1999, 1970; Gill, 2008). The law ushered in less punitive policies for minor drug offences like possession (Gill, 2008).

The Comprehensive Drug Abuse Prevention and Control Act included the reclassification of first-time offences for possession from felonies to misdemeanors dismissible by judges if probation periods were completed successfully. It also allowed for the expungement of drug offences from a minor's record for completing probation. Lastly, instead of minimums for most drug offences, ceilings were introduced for distribution and manufacturing crimes. First offences resulted in a maximum of 15 years,

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while a second offence could result in up to 30 years (Alexander, 2012; Gill, 2008; Hari, 2015; Hinton, 2016).

Sixteen years later, during the Reagan administration, the Anti-Drug Abuse Act of 1986 was passed. The act re-instituted mandatory minimums for drug offences (Alexander, 2012; Gill, 2008, Hari, 2015, Hinton, 2016). The new law was intended to reinstate mandatory minimums only for those involved in trafficking drugs. However, with the passing of the Anti-Drug Abuse Act of 1988, mandatory minimums were instituted for simply possessing crack cocaine (Alexander, 2012; Gill, 2008, Hari, 2015; Hinton, 2016). Also, the amounts needed to trigger a trafficking charge fluctuated from drug to drug with disproportionately small amounts of crack cocaine resulting in mandatory minimums for trafficking, while those involved in the distribution of other drugs had much more leeway (Alexander, 2012; Gill, 2008, Hinton, 2016). This resulted in a de facto policy that, regardless of its intentions, served to incarcerate disproportionately large numbers of people of color, particularly Black Americans living in neighborhoods of concentrated poverty in large cities (Alexander, 2012; Dunlap, Kortaba, Johnson & Flackler, 2010; Hari, 2015; Hinton, 2016).

2.3 Welfare Reform & Collateral Sanctions

Although there were collateral sanctions for people with criminal drug records (PCDR) introduced through legislation from the 1980s, the federal government's efforts to reform welfare in the 1990s expanded and enhanced many collateral sanctions for PCDR. For instance, the Anti-Drug Abuse Act of 1988 introduced restrictions on accessing federally subsidized housing. However, in 1996, the Housing Opportunity and

Program Extension Act initiated a "one strike and you are out policy" for PCDR seeking federally subsidized housing. This law followed suit with provisions from the Personal Responsibility and Work Opportunity Reconciliation Act (frequently referred to as welfare reform) of 1996 that included bans for PCDR from the supplemental nutrition assistance program (SNAP) and barred them from living in a home that was receiving SNAP benefits (Alexander, 2012; Gill, 2008; Hari, 2015; Hinton, 2016).

Barriers to access for higher education for PCDR were established with the passing of the Higher Education Act of 1998, which eliminated PCDR from eligibility for any form of federal student aid. This law was amended in 2005 to only include drug convictions occurring while a student was receiving financial aid. The lengths of the bans varied with the amount and type of drug offence (Alexander, 2012; Gill, 2008; Hari, 2015; Hinton, 2016). Regardless, in line with the overarching theme for many welfare reform policies from the 1990s, these policies aimed to limit and reduce access to housing, food, and educational support at the federal level for PCDR.

2.4 Current Collateral Sanctions for People with Criminal Drug Records

Housing

PCDR face housing bans ranging from three years, as mandated by the federal government, to a lifetime ban in New Mexico. These bans limit eligibility for publicly subsidized housing in projects or through housing choice vouchers (Tran-Leung, 2015). In 48 states, Public Housing Authorities use a range of criteria – such as the completion of a drug and alcohol program and the length of time since the last drug offense – in determining how long PCDR are banned from receiving housing assistance. Only New

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Mexico and Ohio have automatic bans for any drug arrest or conviction. Thirty states use arrests that do not lead to convictions in determining the length of housing eligibility bans (LAC, 2009).

Family members of residents who are arrested for or convicted of drug crimes can also face eviction from subsidized units. Federal policy requires that public housing authorities use language in their leases that allows for eviction from or denial of housing for any "drug-related criminal activity" (Zmora, 2009, p. 1970) by residents, their family members, or any guests. In 2002, the Supreme Court considered whether the Oakland Housing Authority acted constitutionally when they evicted an elderly woman after her developmentally disabled granddaughter was found with cocaine and a crack pipe a mile away from the grandmother's apartment. Although the elderly woman was unaware of her granddaughter's drug use, the Supreme Court unanimously decided against her. This ruling affirmed the constitutionality of this policy and led to an increase in "no-fault" evictions (Zmora, 2009, p.1962).

HUD issued a new ruling concerning PCDR in 2016, stating that possession convictions and drug arrests cannot be used by public housing authorities in determining eligibility for or evictions from subsidized housing. This rule is based on the premise that eligibility criteria based on drug arrests and convictions are racially discriminatory due to the widespread racial disparities in the criminal justice system (Alexander, 2012; Kanovsky, 2016). Yet, by 2018, multiple housing advocacy groups were suing the Trump administration to enforce these policies. The Trump administration is also reconsidering

housing policies, such as the 2016 rule that considers disparate impact discriminatory, signaling it may be discarded altogether (Capps, 2018).

Financial Benefits

In nine states, PCDR face lifetime bans from accessing financial benefits such as SNAP, Temporary Assistance to Needy Families (TANF), and any cash assistance. In 33 other states, PCDR can become eligible if they meet certain requirements, such as completing a drug and alcohol rehab program or having only possession convictions or charges (LAC, 2009). PCDR are also ineligible to live with relatives or friends who receive these benefits, while these same friends and relatives face the loss of these resources, and their housing, if caught harboring PCDR during the time they are subject to a ban or any restrictions (Evans & Porter, 2014; LAC 2009; Tran-Leung, 2015). Only nine states have no restrictions on financial benefits specific to PCDR (LAC, 2009).

Employment & Education

PCDR are not eligible to receive federal student loans if they commit a drug offense while using student loans to pay for any type of post-secondary education (LAC, 2009). Further, the difficulties faced by PCDR in finding employment are well documented (Pager, 2003; Pager & Quillian, 2005; Pager & Western, 2012; Pager, Western, & Sugi, 2009). This is particularly true for Black men in the U.S., who even without a drug offense, are less likely to be hired than a white man with a drug offense (Pager, 2003). Public and private employers can rely solely on questions about arrests in 38 states when deciding to whether to hire PCDR. Furthermore, private sector employers can deny employment or terminate PCDR without considering personal history or any

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other circumstances in all but eight states. Public sector employers have this freedom in 34 states. And in 26 states, all state licensure agencies can revoke or deny licenses without considering any other information besides drug arrest or conviction (LAC, 2009; Pager et al., 2009).

<p style="text-align:center">2.5 Research on Collateral Sanctions</p>

There is a limited body of literature that addresses the impact of collateral sanctions on recidivism and other outcomes for people with criminal histories and much of it focuses on people who committed sex crimes. Overall, this research shows mixed results regarding the relationships between these policies and recidivism, drug use, and criminal behavior. Still, there is some evidence that restrictive policies may be counterproductive in general for people with criminal histories (Anderson, Shannon, Schyb, & Goldstein, 2002; Dickson-Gomez, Convey, Hilario, Corbett, & Weeks, 2008; Hamilton-Smith & Vogel, 2012; Whittle, 2016). Furthermore, some research suggests that other factors besides public safety such as the scarcity of affordable housing, high levels of need for public aid, and a large Black population may motivate the adoption of collateral sanctions for PCDR and others with criminal histories (Plassmeyer & Sliva, 2017; Whittle, 2016; Whittle & Parker, 2014).

Qualitative research with active drug users in Connecticut notes that experiencing even just an arrest for drugs often sets off a chain of events leading to homelessness. This chain includes the loss of housing subsidies and welfare entitlements, eviction, social isolation, and a hindered ability to find stable housing due to criminal records (Dickson-Gomez et al., 2008).

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Anderson et al. (2002) had similar findings in a mixed methods study on people who lost social security payments for substance use disorders after welfare reform in the 1990s. Participants reported diminished access to market housing, bans from public housing, living in squalid conditions, and homelessness. These self-reported living conditions were then significantly associated with increased drug use, criminal behavior, and criminal victimization in quantitative models.

The same issues were discussed by sex offenders in qualitative research done in Wisconsin who reported extreme difficulty in finding stable and affordable housing after the passage of public notification laws (Zevitz & Farkas, 2000). However, Tewksbury et al. (2012) found that being subject to New Jersey public notification laws was not a significant predictor of any type of recidivism, whereas Duwe and Donnay (2008) found significantly reduced recidivism among sex offenders who had to register in Minnesota after the passing of public notification laws.

One study suggests that restrictive policies for those with felonies may be problematic for an entirely different reason. Kurleychek, Brame and Bushway (2006) found that within seven years of one's last offense the likelihood of reoffending becomes statistically equivalent to the chances of someone who has never offended committing a crime. This suggests that policies like lifetime bans may be excessive (Bushway & Sweeten, 2007).

Other quantitative studies lend to the lack of clarity on the relationship of various collateral sanctions policies on recidivism yet point to relationships that may be counterproductive (Whittle, 2016). In a study of the relationship of state felony

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disenfranchisement (losing the right to vote) laws with recidivism, Hamilton-Smith and Vogel (2012) found that states with more restrictive laws, such as permanent bans or only restoring rights after completion of parole, had significantly higher recidivism than less restrictive states. On the contrary, Sohoni (2013) found that states with harsher restrictions for felons on firearms and public housing are associated with significantly decreased recidivism. However, Sohoni (2013) also found that harsher state restrictions for accessing TANF resulted in significantly increased recidivism.

In a review of the research on the impact of collateral sanctions policies on recidivism, Whittle (2016) found evidence that restrictive state housing policies and those that ban access to public aid such as TANF and SNAP are associated with increased recidivism, while again, state restrictions on firearms are associated with decreases in recidivism. The results of this review also led Whittle (2016) to the conclusion that the state of research on collateral sanctions and recidivism is relatively weak; especially in the case of PCDR, which is important given they face lifetime bans on public aid and housing subsidies in some states.

2.6 Reform: Fair Chance Laws, Decriminalization, & Legalization

Since 2005, drug control policy in the U.S. has included mandatory minimums for those caught using or distributing drugs and collateral sanctions for PCDR attempting to either reenter or fully participate in society (Alexander, 2012; Biore, 2007; Bushway & Sweeten, 2007; Evans & Porter, 2014; Henry & Jacobs, 2007; LAC, 2009, 2004; Oyama, 2009; Radice, 2012; Roman & Travis, 2004; Zmora 2009). If these tactics which are intended to suppress drug use, abuse, production, and distribution were effective, there

should have been a reduction in some of these indicators. That simply has not been the case (Alexander, 2012; Gill, 2008; Hari, 2015; Hinton, 2016). Over 1.6 million people were arrested for a drug crime in 2017 – the highest number since 2010 – and recidivism rates for PCDR are higher than 75% (DWF, 2019; Durose, et al, 2014). Further, from 2013 to 2017, drug use and overdose deaths increased significantly in 35 out of 50 states (Sholl et al., 2019).

Given these outcomes and the findings of the research above, it is not surprising that policymakers are starting to push for reforms in both front end (criminality, sentencing) and back end (collateral sanctions, reentry) criminal justice policy. For example, in 2010, Congress passed the Fair Sentencing Act, increasing the amount of crack cocaine needed to trigger the "intent to sell" mechanism which induces mandatory minimums for drug trafficking and distribution. The law also got rid of the mandatory minimum sentence of five years for simple possession of crack cocaine (Love & Schlussell, 2019). In 2018, Congress passed the First Step Act, making the provisions in the Fair Sentencing Act retroactive and allowing for more judicial discretion to skirt mandatory minimum sentencing. However, these policies do not address the issue of collateral sanctions. It has been more than ten years since congress addressed collateral sanctions policies directly at the federal level (Love & Schlussel, 2019).

Fair Chance Policy

The individual states are a different story, as every state has passed some form of legislation since 2012 that specifically deals with the reintegration for people with criminal records. In 2018, 32 states, the District of Columbia, and the Virgin Islands

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passed 62 new pieces of legislation addressing statutory barriers to successful reentry

(Love & Schlussel, 2019). Reforms currently being proposed, and passed, tend to either

restore rights or reduce barriers.

Restoring Rights. A good example of the restoration of rights is the outcome in

Florida in November of 2018 when voters approved a ballot measure restoring voting

rights to over one million people with felonies on their records. This changed a law that

had been around since post-reconstruction in Florida (Love & Schlussel, 2019).

Another method states use to restore rights to PCDR and others with criminal

histories is certificates of relief/rehabilitation. These take different forms and apply to

different offenses state to state, but generally they provide legal relief from collateral

consequences and are granted by the courts. These documents can also provide

employers with protection from litigation for knowingly hiring someone with a criminal

history (Ehman & Reosti, 2015; Love & Schlussel, 2019)

Reducing barriers. The most common method that states have implemented in

order to reduce barriers is through clearing records. This process typically uses

expungement or sealing of records, which legally makes them disappear. These methods

vary from state to state with some offenses being ineligible. There are also issues with

access, given that in many places the process involves hiring a lawyer and filing a

petition with the court. However, some states are taking efforts to reduce barriers to

clearing a record for eligible people through automation and other innovations (Love &

Schlussel, 2019).

Another common tactic to reduce barriers to employment is to focus on occupational licensure. Typically, these are incremental reforms that reduce the types of offenses that can trigger bans for various occupational licenses thus expanding access to employment for people with criminal histories (Love & Schlussel, 2019).

One of the more well-known ways that states and municipalities have tried to reduce barriers for PCDR and other people with criminal histories is through restricting when or if employers or landlords can even inquire about criminal histories. This type of legislation is often referred to as "ban the box," but takes many forms from location to location. Some policies only restrict inquiries about criminal histories to initial screening where others have gone so far as considering denial of housing or employment based on a criminal history (for certain offenses) as discrimination punishable by fines or even jail (LAC, 2016; Love & Schlussel, 2019). It should be noted that some policies that reduce barriers still leave people vulnerable to records searches due to the existence of for-profit companies that make criminal histories readily available online. In some jurisdictions, these organizations are under no specific obligation to ensure the accuracy of the information they make available (Jacobs & Crepet, 2008; Radice, 2012).

Decriminalization & Legalization

The decriminalization and legalization of currently illicit drugs are other policy options states have begun to incorporate as a mix of both front end and back end criminal justice policy reform. Clearly if drugs like marijuana are no longer illegal or do not carry criminal penalties (decriminalization) there will be fewer PCDR produced each year and fewer PCDR for policymakers to be concerned with in the future.

Another interesting policy innovation that some states have incorporated, typically in marijuana legalization policy frameworks, is the sealing or expungement of current and old marijuana offenses that would no longer be illegal under the new law (Berman, 2018; Rosen, 2019). Interestingly, the U.S. government took a similar approach after the prohibition of alcohol ended with the 21st amendment, as Franklin Roosevelt pardoned thousands of "alcohol offenders," clearing their record of any alcohol offenses (Bishop-Stall, 2018). Yet again, there is a lack of uniformity in legalization and decriminalization policies across states, and some of these policy frameworks lack provisions addressing PCDR or collateral sanctions. Also, many have only recently been implemented, so little is known about which legalization or decriminalization policy frameworks will be most beneficial to PCDR, or if the ones eventually implemented will have any specific provisions for PCDR (Berman, 2018; Caulkins et al., 2015).

Research on Fair Chance Policies

The research on policies that aim to mitigate the impact of collateral sanctions is still in its infancy, especially as these policies are new developments across the U.S. However, two recent studies evaluated programs or policies that addressed collateral sanctions, and both offer positive results.

The Vera Institute evaluated a New York City Public Housing Authority program that let some people being released from prison move back in to public housing units if they had family living there. After two years they found that only 1 out of 85 participants had been convicted of a new crime (Bae, et al., 2016).

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Researchers in Michigan produced one of the only – if not the only – existing empirical studies that directly address a fair chance policy. They found that those taking advantage of Michigan's expungement law had low rates of recidivism and that their subsequent crime rates were on par with that of the general population. They also note that they had significant increases in employment rates and significant increases in wages. However, they did find that only 6.5% of eligible people took advantage of the law and point to a lack of information about the law, the associated costs, and the administrative process/time as significant barriers to participation (Prescott & Starr, 2019).

Both studies provide preliminary evidence that when given access to important resources or removing evidence of prior criminal behavior, people with criminal histories can successfully reintegrate into and participate fully in society as law abiding citizens. They also point to the need for more studies that examine the impact of the myriad versions of similar policies being implemented and proposed across the country.

2.7 Conclusion

The history of substance prohibition in the U.S. is replete with examples of how prohibitive and punitive policies have not been able to prevent the use, manufacture, or distribution of substances like alcohol, narcotics, and marijuana, and that they often come with unintended consequences (Alexander, 2012; Bishop-Stall; DWF, 2019; Durose, et al, 2014; Gill, 2008; Hari, 2015; Hinton, 2016; Sholl et al., 2019). Although the research is mixed, and in its infancy, there is growing evidence that at least some collateral sanctions policies are associated with increased recidivism and may be

counterproductive. Furthermore, the nascent research on fair chance policies suggests that

people can and do succeed when they are given access to the resources that some

collateral sanctions prohibit, or when evidence of their criminal history is made

inaccessible. Also, the research suggesting that collateral sanctions may be enacted

partially to limit access to subsidized housing and other public benefits in areas least able

to afford/provide these services financially, indicates that public safety may not be the

intended outcome of these policies in the first place.

The fact that every state has enacted some form of fair chance legislation since

2012 (Love & Schlussel, 2019) – and that criminal justice reform has passed at the

national level – indicates that policies aimed at reducing barriers to reintegration and full

participation in society for PCDR are likely to entertain bi-partisan support moving

forward. However, given the wide range of reforms and their recent implementation, little

is known about what policies will have the best outcomes moving forward, especially for

different groups of people with different types of criminal histories. This makes the

present study, which provides information about the outcomes for PCDR, timely and

important. This study seeks to provide clarity on how best to approach reforms or to

develop new policies that could render the consequences of existing collateral sanctions

policies for PCDR moot.

Chapter 3: General Strain Theory

3.1 Origins of General Strain Theory

General Strain Theory (GST) emerged in 1992 and provided a renewed focus on the role of strain in criminal behavior. Strain was suggested to be at the root of criminality by previous scholars (Agnew, 1992; Cloward & Ohlin, 1960; Cohen, 1955; Merton, 1938), however GST enhanced previous strain theories by offering more inclusive definitions of strain and including emotions and other social/personal factors that research links to criminal behavior (Bandura, 1989; Agnew, 2006, 2001, 1992; Hirshci, 1969).

The first strain theory of delinquency arrived in the 1930s and was expanded on in the 1950s and 1960s (Cloward & Ohlin, 1960; Cohen, 1955; Merton, 1938). The core premise of these strain theories was that blocked goals or one's inability to achieve conventional goals such as middle-class status or some form of financial success precipitate criminal behavior (Agnew, 1992; Cloward & Ohlin, 1960; Cohen, 1955; Merton, 1938). Furthermore, these theories suggested that these impediments include one's socioeconomic status, lack of access to resources, and the perception, or actual absence, of legitimate opportunity to reach one's goals (Agnew, 1992; Cloward & Ohlin, 1960; Cohen, 1955; Merton, 1938). GST expands the notion of what constitutes a strain to include not only blocked economic goals, which were criticized as being incapable of fully explaining crime in the middle and upper classes (Agnew, 2001, 1992), but any

failure to achieve a goal that is positively valued by *any* group or individual (Agnew, 2006, 2001, 1992). This flexibility helps attenuate the critiques levied against previous stain theories that tended to focus on the economic aspirations of the poor (Agnew, 2006, 2001, 1992; Cloward & Ohlin, 1960; Cohen, 1955; Merton, 1938).

3.2 General Strain Theory

GST suggests that strain pressures people into crime (Agnew, 2006). This pressure is exerted on a given individual by the negative emotions that are produced from experiencing strain. The theory also accounts for personal attributes that serve as both protective and risk factors toward criminal coping by incorporating the bonding element of Social Control Theory (SCT; Hirschi, 1969) and the peer influences included in Social Learning Theory (SLC; Bandura, 1989; Agnew, 2006, 2001, 1992).

Three Types of Strain

GST categorizes and defines strain in three different ways. First is any failure to achieve a goal that is positively valued by a group or individual (Agnew, 2006, 2001, 1992). Some examples are failure to obtain a job, education, or some other form of social status (Agnew, 2006, 2001, 1992). The second is the loss or threatened loss of "positively valued stimuli" (Agnew, 1992, p. 50). Examples here include theft of objects, shelter, or land and the loss of jobs, housing, or relationships. The third type of strain is defined as "presenting or threatening to present noxious or negatively valued stimuli" (Agnew, 1992, p. 50) to a group or individual. Examples of strains in this category include abuse and other forms of victimization, incarceration, and even a criminal record.

Informal Social Control, Antisocial Tendencies, & Perceptions of Fairness

GST also theorizes that strains are especially conducive to criminal behavior when they are viewed as unjust or disproportionately experienced by groups or individuals (Agnew, 2006, 2001, 1992). An example of this disproportionate allocation of strain is evident in the arrest, sentencing, and incarceration for drug offenses, which are primarily levied on people of color and the poor (Alexander, 2012; Dunlap et al., 2010; Hari, 2015; Szalavitz, 2016). Furthermore, Agnew (2013, 2006) stresses the importance of how factors that increase informal social control, such as employment, involvement in community organizations, significant others, and raising children, mitigate the propensity to cope with strain through crime. The last major factor that contributes to the likelihood that strain will result in criminal behavior is whether a given person has antisocial tendencies or a predilection toward criminal behavior. Criminal behavior and other antisocial or self-destructive behaviors are proposed to be more likely when one has antisocial peers, takes part in antisocial behavior, or holds antisocial attitudes (Agnew, 2013, 2006).

Conditioning Effects of the Non-Strain Variables: The Full Model

Agnew (2013) notes that most people cope with strain without resorting to criminal behavior. However, ultimately he suggests that under certain circumstances some people will resort to criminal coping to assuage the negative emotions produced by experiencing strain and this depends on their level of connection to society (informal social control), the extent of their pro or anti-social behavior or attitudes along with that of their social networks (antisocial tendencies), and whether they view their experiences

in life as fair (Agnew, 2006; 2001). Criminal coping is posited to be more likely when

those dealing with negative emotions due to a given strain, have low or limited informal

social control, a high predilection toward crime or other antisocial behavior, and a view

that life or the experience of a given strain is unfair or unjust (Agnew, 2013; 2006; 1992;

See Figure 3.1).

Figure 3.1.

General Strain Theory (Adapted from Agnew, 2006)

The Three Major Strains

1. *Introduction of noxious stimuli*

2. *Loss of something of value* ⟶ **Negative Emotions** ⟶ **Criminal coping**

3. *Inability to achieve goals*

Factors Influencing the Effect of Strains and Negative Emotions on Criminal Coping

1. *Informal Social Control* (The costs of criminal coping)
2. *Antisocial Tendencies*
3. *Perceptions of Fairness*
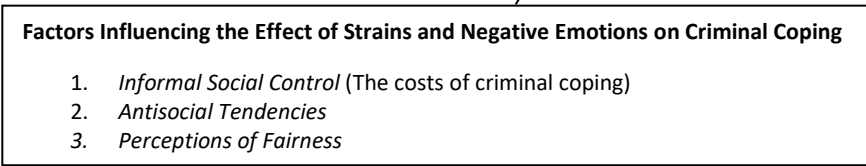
3.3 General Strain Theory Literature

GST has been subject to a wealth of research in the 27 years since its inception.

The constructs that Agnew (2006, 2001, 1992) suggests play a role in criminal behavior

have been operationalized in a myriad of ways and their relationships have been tested

with an ever-growing number of outcomes; ranging from recidivism and violent behavior

to drug use and eating disorders. Agnew (2010) even found some evidence that GST may

help explain terrorism. However, methodological flaws are certainly present in the

literature limiting much of the research's ability to test or provide evidence for some of

the more complex relationships posited by GST (Ackerman, 2009; Agnew, 2013, 2006, 2001; Jang & Rhodes, 2012).

This section will discuss how the main GST constructs of strain, negative emotions, informal social control, antisocial tendencies, and perceptions of fairness have been operationalized in the past and the general findings regarding their relationships with various measures of criminal, self-destructive, and other antisocial behaviors. Concerns about measuring constructs reliably and whether commonly used models accurately depict the relationships suggested by GST are discussed. This is followed by a conclusion regarding the current state of GST research and how it can be improved moving forward, along with the contributions this study makes to addressing some of the current limitations found in the GST literature.

Strain

Strain is operationalized in multiple forms in the GST literature. One of the most common forms of strain studied is *being the victim of a crime* (particularly violent crimes and theft/burglary) which is associated with increased criminal and self-destructive behavior across various populations and locations (Bishopp & Boots, 2014; E. Botchkovar & Broidy, 2013; Button & Worthen, 2014; Ferguson, Bender, & Thompson, 2016; Lo, Kim, & Church, 2008; B. Moon, Blurton, & McCluskey, 2008; B. Moon & Jang, 2014; B. Moon & Morash, 2013; Ousey, Wilcox, & Schreck, 2015; Sigfusdottir, Kristjansson, & Agnew, 2012; Sun, Luo, Wu, & Lin, 2016; Zweig, Yahner, Visher, & Lattimore, 2015).

Other notable strains identified as criminogenic or producing negative behaviors are: *homelessness/housing instability* (Baron, 2008; Ferguson et al., 2016; Wachter, Thompson, Bender, & Ferguson, 2015); *physical, mental, or sexual abuse* (Carson, Sullivan, Cochran, & Lersch, 2009; Ferguson et al., 2016; Pérez, Jennings, & Gover, 2008; Piquero & Sealock, 2010; Wachter et al., 2015; Watts & McNulty, 2013); *family conflict* (Ford, Reckdenwald, & Marquardt, 2014; B. Moon et al., 2008; B. Moon & Jang, 2014; B. Moon & Morash, 2013; B. Moon, Morash, McCluskey, & Hwang, 2009; M. M. Moon & Jonson, 2012; Sigfusdottir et al., 2012); *academic/school stress* (Jun & Choi, 2015; Sigfusdottir et al., 2012; Weller, Bowen, & Bowen, 2013); *economic distress* (Baron, 2008; B. Moon et al., 2008; Piquero, Fox, Piquero, Capowich, & Mazerolle, 2010; Schroeder, Hill, Haynes, & Bradley, 2011; Sigfusdottir et al., 2012; Sun et al., 2016; Vigesaa, 2013); *neighborhood disorder* (Schroeder et al., 2011; Weller et al., 2013); *health issues* (Schroeder et al., 2011); *work issues/unemployment* (Baron, 2008; M. M. Moon & Jonson, 2012; Swatt, Gibson, & Piquero, 2007); *prison conditions* (Morris, Carriaga, Diamond, Piquero, & Piquero, 2012); *discrimination* such as racism, sexism, or classism (Chen, 2003; Eitle, 2002; B. Moon & Jang, 2014; B. Moon & Morash, 2013; B. Moon et al., 2009; Pérez et al., 2008; Sun et al., 2016); and *registering as a sex-offender* (Ackerman & Sacks, 2012).

Outcomes

The research cited above indicates significant relationships between the strains they identified and the following outcomes. In general, higher levels of strain lead to higher levels of negative outcomes such as: *substance abuse/drug crime* (Ackerman &

Sacks, 2012; Baron, 2008; Button & Worthen, 2014; Carson et al., 2009; Chen, 2003; Drapela, 2006; Eitle, 2002; Ford et al., 2014; Jang & Johnson, 2003; Slocum, 2010; Swatt et al., 2007; Vigesaa, 2013; Walton, Dawson-Edwards, & Higgins, 2015; Watts & McNulty, 2013; Zweig et al., 2015); *violent behavior/violent crime* (Ackerman & Sacks, 2012; Baron, 2008; E. V. Botchkovar, Tittle, & Antonaccio, 2009; James, Bunch, & Clay-Warner, 2015; Jang & Johnson, 2003; M. M. Moon & Jonson, 2012; Ousey et al., 2015; Pérez et al., 2008; Piquero & Sealock, 2010; Schulz, 2016; Sigfusdottir et al., 2012; Watts & McNulty, 2013; Zweig et al., 2015); *internet addiction* (Jun & Choi, 2015); *self-injurious behaviors* such as eating disorders, self-mutilation, and suicidal ideation (Bishopp & Boots, 2014; Button & Worthen, 2014; Jang & Lyons, 2006; Piquero et al., 2010; Rebellon, Manasse, Van Gundy, & Cohn, 2012; Sharp, Terling-Watt, Atkins, Gilliam, & Sanders, 2001); *property crime/theft* (Ackerman & Sacks, 2012; Baron, 2008; B. Moon et al., 2009; Piquero & Sealock, 2010; Sigfusdottir et al., 2012; Watts & McNulty, 2013); *burnout among police officers* (M. M. Moon & Jonson, 2012); *arrests/incarceration/recidivism* (Ackerman & Sacks, 2012; Solinas-Saunders & Stacer, 2017; Vigesaa, 2013; Wachter et al., 2015); *white collar crime* (Langton & Piquero, 2007); *bullying* (B. Moon & Jang, 2014; B. Moon & Morash, 2013); and *sex offenses* (Ackerman & Sacks, 2012).

Negative Emotions

In general, the literature on GST supports the notion that those experiencing higher levels of negative emotions due to strain are more likely to cope through criminal or other negative behaviors. The most common negative emotions used in GST research

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are *anger* and *depression*. *Anger* is most often associated with violent crime or outwardly aggressive behaviors like fighting (Ackerman & Sacks, 2012; Baron, 2008; Bishopp & Boots, 2014; E. Botchkovar & Broidy, 2013). *Depression* is most often associated with drug use and other inwardly directed behaviors such as self-harm and suicidal ideation (Drapela, 2006; Ford et al., 2014). Some studies incorporate *anxiety* as well. Anxiety tends to be related with more inwardly directed and self-destructive behaviors, yet the relationship between anxiety and criminal coping is less clear in the literature (Jun & Choi, 2015; Swatt et al., 2007).

Informal Social Control

Throughout the GST literature there is evidence that increased levels of informal social control are associated with a decreased likelihood of criminal coping among those experiencing strains. Some examples include: *family bonds*, often measured as both frequency and quality of contact (Carson et al., 2009; Chen, 2003; B. Moon et al., 2008; B. Moon & Jang, 2014; B. Moon & Morash, 2013; B. Moon et al., 2009); *school bonds* measured in ways such as frequency and quality of contact with teachers, grades achieved, and whether homework is completed (Carson et al., 2009; Drapela, 2006; Ford et al., 2014; Ousey et al., 2015; Watts & McNulty, 2013); and *religious bonds* measured as frequency of attending church and level of involvement in the church (Jang & Johnson, 2003; Swatt et al., 2007). These examples are all identified as protective factors from criminal and self-destructive coping for those experiencing strain.

However, the proposed moderating role that informal social control has between negative emotions and criminal coping is rarely investigated. This is true of both

antisocial tendencies and perceptions of fairness as well, thus there is little available evidence supporting a moderating effect by these variables on the relationship between negative emotions and criminal coping and other anti-social behaviors (Ackerman, 2009; Agnew, 2006; Jang & Rhodes, 2012). This will be discussed further in the section discussing the limitations of GST.

Antisocial Tendencies

Association with delinquent peers, engaging in antisocial behavior, or possessing antisocial attitudes are other variables GST deems important in predicting whether someone experiencing strain will cope with criminal or other self-destructive behavior. Most GST research supports the notion that increases in deviant peers are associated with a greater likelihood of coping with strain in criminal or other negative ways. This is regardless if association with delinquent peers is operationalized as one's *peers using drugs* (Ferguson et al., 2016), being a *gang member* (Ousey et al., 2015), or *membership in a fraternity/sorority* (Piquero et al., 2010). Also, Ousey et al. (2015) found evidence that a lenient attitude toward antisocial behaviors such as cheating on tests, stealing, violence, and substance use was associated with negative or criminal coping with strain.

Perceptions of Fairness

The notion of whether someone experiencing strain views that strain as justly distributed among the general population or whether they view their experience of that strain as fair is the least understood or operationalized variable in the GST literature. Agnew (2006) himself notes this limitation to the claims of GST and finds it problematic as GST theorizes that this sense of injustice is likely the most important factor in whether

one copes in a criminal or negative manner when experiencing strain. Only five articles of around 40 empirical studies cited in this section even incorporated a variable for perceptions of justice. When used it is operationalized as *perceived teacher and rule fairness* (James et al., 2015), *perceived social rank* (Baron, 2008), *perceived racial discrimination* (Chen, 2003), whether *parents and teachers treat one fairly* (Sharp et al., 2001), and directly asking respondents to rate how fair they view the experience of a given strain on a scale ranging from *just (0) to unjust (9)* (B. Moon, et al., 2008). However, only Baron (2008) and James et al. (2015) provide clear evidence in support of increased criminal coping among those who viewed their experience of life or strain as unfair, suggesting this construct needs to be incorporated into more research.

Populations & Places

The findings that higher levels of strain are associated with increased criminal behavior and other negative outcomes holds across the population being studied and the country in which a given study takes place. Studies look at diverse populations including: *sex offenders* (Ackerman and Sacks, 2012); *white collar criminals* (Langton & Piquero, 2007); *homeless/street youth* (Baron, 2008; Ferguson et al., 2016; Snyder et al., 2016; Wachter et al., 2015); *youth (non-homeless)* (Carson et al., 2009; Chen, 2003; Drapela, 2006; Higgins, Piquero, & Piquero, 2011; James et al., 2015; Jun & Choi, 2015; Lo et al., 2008; B. Moon et al., 2008; B. Moon & Jang, 2014; B. Moon & Morash, 2013; M. M. Moon & Jonson, 2012; Ousey et al., 2015; Pérez et al., 2008; Piquero et al., 2010; Piquero & Sealock, 2010; Rebellon et al., 2012; Schulz, 2016; Sigfusdottir et al., 2012; Slocum, 2010; Watts & McNulty, 2013; Weller et al., 2013; Zavala & Spohn, 2013);

LBGTQ youth (Button & Worthen, 2014); *police officers* (Bishopp & Boots, 2014; M. M. Moon & Jonson, 2012; Swatt et al., 2007); *prisoners* (Blevins, Listwan, Cullen, & Jonson, 2010; Morris et al., 2012; Solinas-Saunders & Stacer, 2017; Sun et al., 2016; Vigesaa, 2013; Zweig et al., 2015); *incarcerated women* (Sun et al., 2016; Vigesaa, 2013); *Black Americans* (Jang & Johnson, 2003; Jang & Lyons, 2006; Walton et al., 2015); *Black women* (Walton et al., 2015), *Latinx Americans* (Pérez et al., 2008); *Native Americans* (Chen, 2003; Vigesaa, 2013); *Native American women* (Vigesaa, 2013); *males only* (Colbert, 2005); and *women only* (Eitle, 2002; Schroeder et al., 2011; Sharp et al., 2001; Sun et al., 2016; Vigesaa, 2013; Walton et al., 2015).

These studies take place across the world and generally support GST. They have been conducted in countries such as *Korea* (Jun & Choi, 2015; B. Moon et al., 2008; B. Moon et al., 2009), *China* (Sun et al., 2016), *Germany* (Schulz, 2016), *Russia* (E. Botchkovar & Broidy, 2013), *Romania*, *Latvia*, *Bulgaria*, *Iceland,* and *Lithuania* (Sigfusdottir et al., 2012), while the majority have taken place in the U.S. (Agnew, 2006).

Methodological Limitations

Direct relationships. There is growing evidence across the literature supporting the direct relationships proposed by GST between strain, negative emotions, informal social control, antisocial tendencies, and to some degree, perceived injustice with criminal coping or other antisocial behaviors (Ackerman & Sacks, 2012; Baron, 2008; Bishopp & Boots, 2014; E. Botchkovar & Broidy, 2013; Ferguson et al., 2016; James et al., 2015; Snyder et al., 2016; Wachter et al., 2015). However, these results are not always consistent: some may find evidence for the direct relationships between strain and

a given outcome, while others find evidence for multiple GST constructs and a given outcome (Akerman, 2009; Agnew, 2006; Jang & Rhodes, 2012). Most often, researchers incorporate strain and negative emotions while leaving out some combination of informal social control, antisocial tendencies, or perceptions of fairness. This may produce biased results and explain some variation. This phenomenon is frequently attributed to data constraints, particularly when incorporating secondary data not collected specifically for the study of GST (Ackerman, 2009; Agnew; 2006; Jang & Rhodes, 2012).

Indirect relationships. The lack of available variables representing all of the constructs posited by GST is made more problematic considering that the research is less conclusive or voluminous regarding evidence supporting the more complex indirect relationships proposed between GST variables and a given outcome (Ackerman, 2009; Agnew, 2006, 2001; Jang & Rhodes, 2012). GST does not simply suggest that there are direct relationships between each of its constructs and criminal coping but suggests some very specific indirect relationships between the variables. Negative emotions are thought to mediate the relationship between strain and criminal coping while informal social control, antisocial tendencies, and perceptions of fairness are hypothesized to play a moderating roll in the overall relationship, particularly on the relationship between negative emotions and the outcome (Agnew, 2013; 2006; 2001; 1992).

If the variables representing all the constructs in GST are unavailable, it is difficult to test the complex relationships in GST. This helps explain the relatively sparse nature of this research. The most common assessment of more complex relationships is testing the mediating effect of negative emotions on the effect of strain on criminal

coping and other anti-social outcomes. There is mixed evidence from these types of studies regarding a mediating effect, with anger and depression being the most likely negative emotions to produce a mediating effect (Agnew 2006, Botchkovar, Tittle, & Antonaccio, 2009; Jang & Johnson, 2003). Other researchers have looked at the mediating effect of informal social control, antisocial tendencies, and perceptions of fairness as well, finding limited evidence supporting a mediating effect of measures representing informal social control and antisocial tendencies (Brezina, 1998; Maxwell, 2001; Paternoster & Mazerolle, 1994). However, Jang and Rhodes (2012) point out that these studies do not use methods allowing them to estimate a coefficient or test the significance of the indirect effect, suggesting mediation may be overstated.

Another concern voiced by Agnew (2006, 2001) and supported by Jang and Rhodes (2012) notes minimal research that addresses moderated mediation in testing the relationships in GST. Given that informal social control, antisocial tendencies, and perceptions of fairness are hypothesized to moderate the relationship between negative emotions and antisocial outcomes and that negative emotions are said to mediate the relationship between strain and antisocial outcomes, models that test whether there is moderation taking place on the mediated relationship between strain, negative emotions, and criminal coping are needed to test the full theoretical model proposed by GST (Agnew, 2006; 2001; Jang & Rhodes, 2012). Again, in previous studies assessing for moderation, typically it is explored as interactions between strain and negative emotions, whereas little concern is placed on assessment of moderated relationships between negative emotions and a given outcome. Also, although existing studies provide some

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minimal evidence supportive of moderation, particularly for antisocial associations (Agnew, 2002; Aseltine, Gore, & Gordon, 2000; Mazerolle et al., 2000; Moon et al. 2009), there is limited evidence for moderated mediation. Further, none statistically test the significance for specific indirect effects at different levels of the moderators included in a given study (Agnew, 2006; Jang & Rhodes, 2012). Jang & Rhodes (2012) addressed this lack of more complex assessments of GST's proposed pathways and found that antisocial associations/tendencies increased the effect of anger on criminal offenses and drug use, while informal social control did not have a significant moderating effect. They did not include a variable for perceptions of fairness.

State and trait variables. Even when all variables are available, incorporated, and complex models are analyzed, there are still challenges related to how variables are measured and whether they represent a state of being at a given time or a trait emotion (e.g. an overall antisocial attitude as opposed to a momentary increase in predilection toward antisocial behavior). Again, much of the source of this inconsistency in the use of trait and state variables is the availability of appropriate items in preexisting data sets that were not necessarily collected with the intent to comprehensively study GST (Ackerman, 2009; Agnew, 2006; Jang & Rhodes, 2012). There tend to be different results for trait and state variables when considering both direct and mediated relationships (Agnew, 2006; Capowich, Mazerolle, & Piquero, 2001; Mazerolle, Piquero, & Capowich, 2003). Furthermore, Agnew (2006, 2001, 1992) calls for the use of state variables when possible, as they are more conceptually connected with the experience of a given strain, especially if that strain is not a permanent factor in one's life. Given the different results

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from state and trait variables in assessing direct relationships and mediation, it is likely that trait and state variables will produce different results in moderated mediation models moving forward, with state variables hypothesized as producing estimates more closely aligned with the predictions of GST (Agnew, 2006; Jang & Rhodes, 2012).

Conclusion

There is a large body of research backing many of the proposed relationships and pathways in GST. These studies incorporate a range of different populations and negative outcome variables. However, people with criminal drug records (PCDR) are noticeably missing among the ranks of the populations studied. More research is also needed that incorporates a measurement for perceptions of fairness to strengthen the empirical evidence for GST (Agnew, 2006). Also, studies incorporating models that can more accurately assess mediation, moderated mediation, and the coefficients of their indirect effects would make a significant contribution to the current literature on GST and provide a more robust understanding of the efficacy of the entire theoretical model (Agnew, 2006; Jang &Rhodes, 2012).

This study expands on existing GST literature by focusing on the experiences and outcomes of an understudied population in PCDR. It also addresses some previous limitations in GST literature by incorporating a measure for each of the tenets deemed important by GST and testing for mediation and moderated mediation using methods and statistical analyses that allow for estimating coefficients for specific indirect effects and testing their significance. However, this study still faces the common issue of using both state and trait variables to operationalize some of the important GST constructs. This is

discussed further in both the chapter 5 (methods) and the limitations section of chapter 7 (discussion).

Chapter 4: Literature: Housing, Drug Use, Criminal Behavior, & Public Opinion

4.1 Criminal Behavior, Drug Use & Housing

Researchers have used a variety of methods to assess the relationships between housing and criminal behavior or drug use and seem to agree that stable housing typically serves to reduce both behaviors (Baldry, McDonnell, & Maplestone, 2003; Briggs et al., 2009; Clifasefi et al., 2013; De Saxe Zerden et al., 2013; Elifson, Sterk, & Theall, 2007; Ellison, Fox, Gains, & Pollock, 2013; German, Davey, & Latkin, 2007; Gibson et al., 2011; Manzoni, Brochu, Fischer, & Rehm, 2006; O'Leary, 2013; Somers et al., 2013). Also, in a review of reentry program studies published between 2000 and 2010, Wright et al. (2014) points out that programs that offer some sort of housing or a housing subsidy tend to have better outcomes. Wright et al. (2014) also notes that results from the existing RCTs were less promising than those from quasi-experimental designs using matching or studies assessing associations. In a similar vein, O'Leary (2013) found that stable housing likely has some utility in reentry programs aiming to reduce recidivism, yet the exact role, any causal factors fundamental to that role, and any strategies to increase access to stable housing are not clear in the literature. Furthermore, most studies lack the methodological rigor required to make firm causal claims (O'Leary, 2013; Wright et al., 2014). There are some recent studies that address these methodological concerns. A study employing an RCT in assessing the impact of a housing first program on re- offending

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among formerly homeless adults with mental health diagnoses, found that those in the treatment group receiving housing first had less than a third of the number of re-offenses than those in treatment as usual (Somers et al., 2013).

Lutze et al. (2014) conducted a quasi-experimental study that used propensity score matching to evaluate the Washington State Housing Pilot Program which provides housing for three months' post release. They found that, compared to 208 participants released to standard parole supervision, the 208 parolees released to the housing program had significantly fewer new convictions and returns to prison. Furthermore, their findings suggest that any period of homelessness significantly increases the likelihood for recidivism through new arrests, convictions, and incarceration. This finding is consistent with many previous studies that indicate homelessness is associated with higher rates of recidivism and that previous incarceration is related to higher instances of homelessness (Baldry et al., 2003; De Saxe Zerden et al., 2013; Geller & Curtis, 201; Hamilton et al., 2015; Manzoni et al., 2006; Metraux & Culhane, 2004; Walker, Hempel, Unnithan, & Pogrebin, 2014).

In a longitudinal study incorporating a random sample of 3000 urban men, Geller and Curtis (2011) found that men that have been incarcerated face significantly higher likelihoods of homelessness and suggest that this may be due in part to the bans from public housing made possible by welfare reform policy in the 1990s. Fedok, Fries, & Kubiak (2013) noted that women are the most vulnerable to homelessness after release from prison and have significantly higher rates of substance abuse than incarcerated males. In a study of 103 homeless chronic substance users, Collard, Lewison and Watkins

(2014) found that longer stays in supportive housing lead to significantly less drug use and significantly greater periods of total abstinence.

De Sax Zerden et al. (2013), Hikert and Taylor (2011), and Morani, Wikoff, Linhorst, and Brattton (2011) all note the importance of housing in the reentry process. They found that Puerto Rican injection drug users (IDU) are significantly more likely to have experienced recent imprisonment if unstably housed, that participation in supportive housing programs reduces jail bookings among the chronically homeless, and that in a reentry intervention that provided $3,000 at release, participants spent nearly all the money on housing (De Sax Zerden et al., 2013; Hikert & Taylor, 2011; Morani et al., 2011). Another study found that, among 94 chronically homeless men with alcohol abuse problems, each month of housing-first exposure resulted in 5% fewer arrests (Clifasefi et al., 2013).

Recent qualitative work also highlights the importance of housing in drug use. A study in which 45 injection drug users were interviewed in England showed that much riskier and heavier drug use was identified by those experiencing homelessness and other housing instability than those with stable housing (Briggs et al., 2009). Clare (2006) provides another profound insight into the fundamental value of housing for PCDR. Qualitative interviews revealed that, due to the various barriers to housing for drug users, such as restrictive policy (Tran-Leung, 2015) and landlord attitudes (Evans & Porter, 2014) housing has become such a valuable commodity that it can be used to procure drugs, sex, money, and a variety of other goods (Clare, 2006). This alludes to another

unforeseen consequence of restrictive housing policies for PCDR in that they may be

contributing to the existence of so called "crack" or drug houses.

Severson, Veeh, Bruns, and Lee (2012) and Pettus-Davis, Howard, Dunningan,

Shceyett, and Roberts-Lewis (2016) offer other interesting contributions to reentry

literature. Severson et al. (2012) notes the need for researchers to measure outcomes

other than recidivism such as improved housing stability and social support. Pettus-Davis

et al. (2016) address the lack of RCT in reentry work by offering examples of the

difficulties researchers face and some possible solutions.

Overall the literature suggests that housing plays a key role in reducing recidivism

and risky drug use regardless of the methodology being employed. See Appendix A for

more information regarding the studies in this section.

4.2 Attitudes Toward Housing Offenders

There is limited research on how the public feels about providing transitional

housing to PCDR and formerly incarcerated people (FIP) in general (Garland, Wodahl, &

Saxon, 2014; Garland, Wodahl, & Schuhmann, 2013; Garland, Wodahl, & Smith, 2015;

Garland, Wodahl, & Mayfield, 2011). One group of researchers sought to address this

and completed four recent studies that provide some insight into the attitudes people hold

and how those attitudes are influenced by variables consistent with value conflict and

religiosity frameworks.

First, they conducted qualitative research with FIP in Missouri to better

understand the challenges to successful reintegration they faced both immediately after

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release and three months later. Many participants spoke of issues with accessing stable housing, particularly when first released (Garland, Wodahl, & Mayfield 2011).

The subsequent quantitative studies were based on data collected from a survey sent to a random sample of Missouri residents inquiring about their attitudes toward FIP and programs intended to aid in their integration back into society. The results were promising at first glance and indicated that people are supportive of providing housing for FIP. This support waned significantly when the FIP were identified as drug offenders. People with higher education levels and relatives experiencing incarceration were significantly more likely to support transitional housing in all cases.

When variables associated with theories of value conflict and religiosity were introduced, support for transitional housing wavered. Questions about whether respondents would still support transitional housing if it was in their town or neighborhood were introduced, along with whether their support remained if it meant an increase in taxes or during a financial crisis to represent value conflict. For religiosity respondents were asked if they believed in a punitive god and about their belief in forgiveness. The authors found that support for housing evaporates when it would be in one's neighborhood or increase taxes and that belief in a punitive god was also significantly associated with negative attitudes toward transitional housing for FIP (See Appendix A) (Garland et al., 2014; Garland et al., 2013; Garland et al., 2015).

The research suggests that many people seem to support the idea of providing transitional housing for FIP, but their support wavers when things like location, financial

impact, and types of offender are accounted for. See Appendix A for more information on the studies in this section.

<h3 style="text-align:center">4.3 Overall Limitations & Gaps</h3>

Methodological Limitations

Much of the reentry research, particularly concerning the role of housing, is either cross-sectional or does not utilize a comparison group (O'Leary, 2013; Pettus-Davis et al., 2016; Wright et al, 2014). An increase in the use of matching in quasi experimental designs (Belenko, Foltz, Lang, & Sung, 2004; Duwe & Donnay, 2008; Hamilton et al, 2015; Lutze et al., 2014; Taylor, 2013; Tewksbury et al., 2012; Veeh et al., 2015) and a recent RCT (Sommers et al., 2013) point to improved methodologies for research on this topic. Still most studies looking at the relationship between housing and drug use, criminal behavior, or recidivism incorporate purposeful or convenient sampling without much attention to randomization or statistical matching methods.

However, given that the population under investigation in many of these studies can be hard to access for multiple reasons – such as the criminality of their behavior or the fact that they are incarcerated – these sampling approaches are appropriate. Researchers should also expect issues with eligibility, non-responsive participants, sample sizes, institutional delays, and program attrition (Pettus-Davis, et al., 2016). Some of the possible solutions offered are oversampling, including time for possible delays into grants, and offering supportive services to encourage consistent participation (Pettus-Davis et al., 2016). Using existing datasets is another possible way to deal with sampling

issues, attrition and other problems, yet presents its own challenges to the rigor of research and ability to make causal claims.

The studies included in this review considering public attitudes were all conducted in one state and are hard to generalize. States with different levels of education, religiosity, and personal exposure to the criminal justice system may produce starkly different results. However, as research on public attitudes expands to larger populations such as the entire U.S., studies that focus on specific states, regions, and other localities will be helpful in building the most feasible and appropriate policies for a given location (Garland et al, 2013; Garland et al., 2014; Garland et al., 2015).

Measuring Recidivism

The measures used for recidivism also create methodological problems. Recidivism may be measured as a new criminal charge, a new conviction, a return to prison, or a technical parole/probation violation. This creates challenges for comparing studies, as some make use of only some of these measures. Still, the variety of outcomes used helps clarify the specific types of criminal justice system involvement programs or policies can impact. In addition, using official data may underrepresent the actual criminal activity of participants as it only accounts for behaviors that result in law enforcement contact and arrest. Some studies have incorporated self-reports of criminal behavior and substance use to deal with this issue. This approach has its own set of problems as many PCDR and other FIP may be reluctant to incriminate themselves. Using both measures as outcomes may be one possible way to increase reliability of results.

Theoretical Limitations & the Glaring Gap

The use of guiding theoretical frameworks is noticeably lacking in the literature on the relationship between housing and drug use, recidivism, or criminal behavior. Appendix A depicts visually how infrequently researchers use meaningful theoretical frameworks to develop hypotheses or explain results.

One of the most glaring gaps identified in the literature is the lack of research regarding housing's role in recidivism specifically for PCDR (Whittle, 2016). The literature is beginning to coalesce around the notion that housing is a key – if not the key – ingredient for successful reentry and that it has a positive impact on substance abuse (Bladry et al., 2003; Belenko et al., 2004; Briggs et al., 2009; Bruce et al., 2014; Clifesi et al., 2013; Duwe & Donnay, 2008; Ellison et al., 2013; Hamilton et al, 2015; Sommers et al., 2013). However, PCDR face a multitude of challenges in accessing housing due to policy and stigma (Evans & Porter, 2014; Tan-Leung, 2015). Research into the role housing plays for this specific population has the potential to help mitigate the unique challenges to full social and economic participation faced by PCDR. Again, to build a meaningful body of research on this topic, researchers must identify appropriate theoretical perspectives to inform hypotheses and operationalize variables in these studies and others looking at housing's role in drug use, criminal behavior, and recidivism more generally or for other specific populations.

4.4 Research Questions & Hypotheses

General Strain Theory (GST) provides a promising lens for examining the relationship between housing instability and both formal recidivism and any recidivist

criminal behavior. The utility of GST is well-supported by research on a range of populations and antisocial behavioral outcomes such as criminal behavior. Gaining a theoretical understanding of how housing is involved in recidivist criminal behavior among PCDR will allow for more precisely targeted research and, ultimately, interventions or policies that are based on theory and evidence.

The current study explores the relationships between housing instability and recidivist criminal behavior for PCDR through the following research questions and hypotheses that are based on a GST framework and the current literature on housing, criminal behavior, and substance use. Answering these questions will add to the literature on both housing's relationship with recidivism and GST, while offering insight into existing and future policies that pertain to PCDR.

1. Is housing instability or strain among PCDR associated with recidivist criminal behavior?

    a. Housing instability and strain will both be associated with increases in recidivist criminal behavior.

2. Is the relationship between housing instability and recidivist criminal behavior mediated by negative emotions, informal social control, antisocial tendencies, and perceptions of fairness?

    a. Housing instability will be associated with an increase of negative emotions, antisocial tendencies, and perceptions of unfairness.

    b. Housing instability will be associated with decrease of informal social control.

c. Negative emotions, antisocial tendencies, and perceptions of unfairness will be associated with an increase in recidivist criminal behavior.

d. Informal social control will be associated with a decrease of recidivist criminal behavior.

e. The relationship between housing instability and recidivist criminal behavior will be at least partially mediated by negative emotions, informal social control, antisocial tendencies, or perceptions of fairness.

3. Is the relationship between strain and recidivist criminal behavior mediated by negative emotions, informal social control, antisocial tendencies, and perceptions of fairness?

a. Strain will be associated with an increase in negative emotions, antisocial tendencies, and perceptions of unfairness.

b. Strain will be associated with a decrease of informal social control.

c. Negative emotions, antisocial tendencies, and perceptions of unfairness will be associated with an increase of recidivist criminal behavior.

d. Informal social control will be associated with a decrease of recidivist criminal behavior.

e. The relationship between strain and reported recidivist criminal behavior will be at least partially mediated by negative emotions, informal social control, antisocial tendencies, or perceptions of fairness.

4. Is the relationship between negative emotions and recidivist criminal behavior dependent on levels of informal social control, antisocial tendencies, and

perceptions of fairness when accounting for the effects of housing instability and strain?

    a. The relationship between negative emotions and reported recidivist criminal behavior will be strongest when levels of informal social control are low, while levels of both antisocial tendencies and perceptions of unfairness are high.

    b. The relationship between negative emotions and reported recidivist criminal behavior will be weakest when levels of informal social control are high, while levels of both antisocial tendencies and perceptions of unfairness are low.

Chapter 5: Methods

This cross-sectional study explores the relationship between housing instability and recidivism for people with criminal drug records (PCDR) using the pathways and variables consistent with the constructs in General Strain Theory (GST). The study is exploratory in that it tests whether the relationship between housing instability and recidivism found among other populations exists for PCDR. The appropriateness of GST for PCDR is also explored by incorporating variables and forming hypotheses based on a GST perspective. The study uses two series of ordinary least squares (OLS) regression models testing the relationships between housing instability, along with a series of control variables gleaned from the literature on criminal behavior and variables representing the constructs in GST, with two different measures of recidivism. Two sets of path analysis models are then incorporated in order to test the indirect (mediation), and conditional indirect (moderated mediation) relationships between housing instability (strain) and criminal behavior suggested by GST. These combined approaches allow for a robust exploration of the direct relationships between the independent variables and the two different measures of recidivism in the study. They also allow for an assessment of the direct relationships among the independent variables as part of the more complex models that test both multiple mediation and moderated mediation between housing instability, strain, and the two recidivism outcomes.

5.1 Data

This study uses data from The Fragile Families (FF) and Child Well Being Study which focuses on children born to predominantly (75%) unmarried parents and provides interviews with both the mother and father at the time of birth, then by phone or in person during the years the child turns 1, 3, 5, and 9 years old. The first wave of data was collected between 1998 and 2000 in the hospital where the child was born. Data collection for the year the child turns 15 (wave 6) started in 2014 and is now available but does not include criminal justice involvement. Nearly 5000 families participated in the study and the data were originally collected at 75 hospitals located in 20 cities (See Table 5.1). The current study uses deidentified data that is publicly available with approval from Princeton University's Office of Population Research Data Archive. As such, exposure of the identities of participants is low risk in this study and it was deemed exempt by the Institutional Review Board at the University of Denver.

5.2 Participants

The sample for this dissertation consists of 328 fathers who reported at least one formal drug crime (charge or conviction) in waves two through four (child age one, three, & five) of data collection. Participants are considered PCDR at the earliest report of a drug charge or drug conviction. Any subsequent reports of new charges, convictions, or other criminal behavior in the following waves of data indicate instances of recidivist criminal behavior.

Table 5.1.

Cities & Hospitals Included in the Fragile Families Study (Carlson, 2008)

City	Hospitals
Austin	Brackenridge Hospital, Columbia St. David's Medical Center, Seton Medical Center
Oakland	Alameda Co. Medical Center, Summit Medical Center
Baltimore	Johns Hopkins Hospital, Mercy Medical Center, Sinai Hospital of Baltimore, Union Memorial Hospital, University of Maryland Medical System
Detroit	Henry Ford Hospital, St. John's Detroit Riverview Hospital, Wayne State: Hutzel, Wayne State: Sinai/Grace
Newark	Newark Beth Israel Medical Center, Columbus Hospital, St. James Hospital, St. Michael's Medical Center, Univ. of Medicine and Dentistry of NJ (UMDNJ)
Philadelphia	Albert Einstein Medical Center, Episcopal Hospital, Hospital of University of Pennsylvania (HUP), Pennsylvania Hospital, Temple University Health Services Center, Thomas Jefferson University Hospital
Richmond	Chippenham Medical Center, Medical College of Virginia
Corpus Christy	Columbia Doctor's Regional Hospital, Christus Spohn Hospital South, Christus Spohn Memorial Hospital, Columbia Bay Area Medical Center
Indianapolis	Methodist Hospital of Indiana, Wishard Health Services, St.Vincent Hospitals and Health Services
Milwaukee	Sinai-Samaritan Medical Center, St. Joseph's Hospital, St. Mary's Hospital
New York City	Elmhurst Hospital Center, Mt. Sinai Medical Center, Long Island College Hospital, New York Presbyterian Medical Center, North Central Bronx Hospital, NY Hospital - Cornell Medical Center, Harlem Hospital Center, Lutheran Medical Center
San Jose	Santa Clara Valley Medical Center, Regional Med. Ctr. of San Jose, Santa Teresa Community Hospital, Kaiser Permanente Santa Clara
Nashville	Baptist Hospital, Centennial Medical Center, Vanderbilt Univ. Medical Center
Boston	Brigham and Women's Hospital*, Beth Israel Deaconess Medical Center, Boston Medical Center
Chicago	University of Chicago Hospital, Michael Reese Hospital and Medical Center, Cook County Hospital, Mt. Sinai Hospital, Mercy Hospital and Medical Center, Northwestern Memorial Hospital
Jacksonville	University Medical Center, St. Vincent's Medical Center, Baptist Medical Center
Norfolk	Sentara Norfolk General Hospital, Sentara Leigh Hospital
Toledo	Toledo Hospital, St. Vincent Mercy Medical Center
San Antonio	Southwest Methodist Hospital, Christus Santa Rosa Hospital, Metropolitan Methodist Hospital, Baptist Medical Center, University of Texas Health Science Center
Pittsburgh	Magee-Women's Hospital, Allegheny General Hospital, Mercy Hospital of Pittsburgh

Data Screening

Variables for participants were gathered from the wave of the first reported drug charge or conviction. In some cases, interviewers skipped questions that had been answered in previous waves if the answer was already known or had not changed (e. g. race/ethnicity). In these instances, the information from previous waves of the data were used.

The sample likely doesn't represent all PCDR in the data as only those with *current drug charges* or *histories of and current drug convictions* could be included due to data constraints. This likely leaves out people who had previous drug charges that may have been dropped or did not result in a conviction. Both aforementioned factors serve to limit causality and generalizability, which is discussed in detail in the limitations section of chapter seven. Table 5.2 shows the descriptive statistics for participants at the wave of their first reported drug charge or conviction.

Exclusion Criteria

Data on criminal justice system involvement became available in the second wave of collection for fathers. Criminal justice system involvement was not collected for mothers until wave three of data collection. This fact greatly reduced the chance for mothers to participate in this study, and therefore only fathers' data is included. Furthermore, using only data from waves three and four would have reduced the sample size by over 50% and would have compromised the use of complex analyses in this study. Self-reported drug use and drug dealing were not considered to be indicative of having a criminal drug record because only formal contact with the criminal justice

system produces a record. Those reporting a first instance of a drug charge or conviction from wave five (child age nine) were not included in this study as data on subsequent criminal behavior is not available after wave five, making recidivism impossible to measure in those cases.

Table 5.2.

Descriptive Statistics for Control Variables

Variable	Percentage	Mean (SD)
White	7.9%	
Black	73.2%	
Latino	16.5%	
Education Level		1.70* (.70)
Age		27.31 (6.05)
Income		$25,337.50 ($29,295.73)
Previous Conviction	89.6%	
Ever Incarcerated	74.1%	
1st Drug Offense Reported Wave 2	58.5%	
1st Drug Offense Reported Wave 3	25.3%	
1st Drug Offense Reported Wave 4	16.2%	

Note: * = Scored from 1 – 4. One represents some high school and two represents a high school diploma or equivalent

Sampling Procedures & Weights for the Fragile Families Study

Weights were produced by the FF study to account for sampling error and the non-random selection of some cities and participants (over sampling of unmarried parents). Weighting allows researchers to draw inferences from complex survey data more accurately as they correct bias in parameter estimates. Also, when researchers do not incorporate weights provided by producers of complex survey data, their findings are

only generalizable to their sample and not the larger population under investigation (Bell, et al., 2012).

The FF study set quotas ranging from 23 – 25% in each city for how many married couples would be allowed to participate in the study. Also, four of the cities included were added after the random selection of 16 cities out of the 77 U. S. cities with populations larger than 200,000 people in 1999. These cities were added at the request of the FF funders due to their specific interest in the populations of those cities. These factors led to the creation of both national (16 cities) and city (20 cities) sample weights. This study incorporates the city sample weights as that resulted in a larger sample of PCDR allowing for more complex analyses incorporating multiple controls previously found to be associated with criminal behavior and recidivism.

The FF study investigators produced a document on how to incorporate weights in statistical analyses to help researchers produce more accurate measures of standard errors and variance in their models (Carlson, 2008). When the city sample weights are applied, the 328 fathers included in this study are representative of a population of 18,543 fathers with criminal drug records who had a child between 1998 – 2000 in the 20 major American cities listed in Table 5.1

<div align="center">5.3 Measures</div>

Overall this study incorporates eight control variables along with six independent variables derived from GST. With 328 cases and 14 variables, this results in a case to variable ratio of 23.43/1. For both path analysis and OLS regression, ratios above 20/1 are considered ideal (Jackson, 2009). It should be noted that when the six interaction

variables are introduced in models that assess for moderated relationships, this ratio dips

to 16.4/1 which is still sound and surpasses both the 15/1 ratio and minimum sample size

of 200 suggested for path analyses by Tabachnick and Fidel (2013).

Controls

There are multiple control variables used in this study. Demographics associated

with criminal behavior and recidivism from the literature available in the FF data are

race/ethnicity (Black vs. all others)*, age, education level,* and *income* (See Table 5.3 for

details)*.*

Controls for criminal histories are also incorporated. The timing of the first formal

drug offense (which wave of FF data) is used as participants whose offenses came in later

waves had less time to engage in any subsequent criminal behavior. Whether participants

had *ever been incarcerated* or had a *previous* conviction prior to their first reported drug

offense are also included as research suggests that both are predictors of subsequent

criminal behavior (Cullen, Johnson, & Nagin, 2011). See Table 5.3 for a concise view of

control variables.

Strain (Other than Housing Instability)

Many studies that test GST make strain composites or single out a given source of

strain (Ackerman, 2009; Agnew, 2006). This study incorporates both, as there are data

representing multiple other strains than housing instability in the FF data. This variable

uses responses to items that ask "in the last year did/do you have" *divorces/breakups,*

health issues (do you have a health issue that stops you from working?)*, material*

hardships (did children go hungry, not pay bills, utilities shut off, or not afford meds?)

drug/alcohol dependence (meet criteria from Composite International Diagnostic

Interview - Short Form [CIDI-SF; Kessler et. al. 1998] for drug or alcohol dependence)*,*

physical abuse (does current partner slap or kick you, hit you with fist or object, or force

sex?)*,* and *verbal/emotional abuse* (does current partner insult you, isolate you from

friends/family, or withhold money/ability to work?). This variable is drawn from the

wave of the first reported drug charge or conviction (See Table 5.3*)*.

Table 5.3.

Control Variables, Level of Measurement, & Coding

Variable	Level of Measurement	Type	Coding
Race	Categorical	Control	0 No, 1 Yes (For Black)
Age	Continuous	Control	Age in years
Education Level	Ordinal	Control	1 – 4 (higher scores = more education; ranges from less than high school to college or graduate school)
Income	Continuous	Control	Income in $ U.S. per year
Wave of 1st Drug Offense	Ordinal	Control	1 – 3 (1 = Wave 2, 2 = Wave 3, 3 = Wave 4)
Ever Incarcerated	Categorical	Control	0 No, 1 Yes
Convictions Before Study	Categorical	Control	0 No, 1 Yes
Strain	Continuous	Control	0 – 6 (Higher scores = more strain)

Housing Instability

Housing instability is measured by the number of times someone has moved in

the last year. Higher numbers of moves indicate more housing instability (See Table 5.4).

This variable comes from the wave of the first drug offense.

Negative Emotions

The FF survey uses variables that come directly from the World Health Organization's Composite International Diagnostic Interview-Short Form (CIDI-SF, Kessler et. al. 1998). Negative emotions are represented by the scores for both *anxiety* (0 – 13) and *depression* (0 – 8). This variable comes from the wave of the first reported drug offense (See Table 5.4).

Informal Social Control

Informal social control is measured from 0 to 6. This variable is a composite of yes/no responses to the existence of six items in the FF data that represent different aspects of connections to other people and one's community. The variables representing social control are as follows: *Married/living with current partner; Supportive network of family/friends; Supportive of others; Community involvement; Attending school/educational services; and Employment.* These variables are represented in the FF study by questions asking if participants are married or cohabitating, if they can loan/borrow money to/from friends/family, if they volunteer in the community, if they are currently in school or other educational activities, and if they are currently employed (See Table 5.4).

Antisocial Tendencies

This study uses a composite score from four items found in wave four of the FF data to measure antisocial tendencies. These items are: *I do things that may cause trouble with the law, I lie or cheat, I frequently get into fights, I don't seem to feel guilty when I misbehave.* The response scale for each question ranges from 1 to 4 with 1 = strongly

agree and 4 = strongly disagree. These items were recoded to range from 0 to 3 with 0 =

strongly agree and 3 = strongly disagree. Then the items were reverse recoded where 0 =

strongly disagree and 3 = strongly agree. This allowed higher composite scores to

indicate increased antisocial tendencies (See Table 5.4).

Table 5.4.

Housing Instability, General Strain Theory Variables, & Outcomes

Variable	Level of Measurement	Mean (Standard Deviation)	Coding
Housing Instability	Continuous	.98 (1.10)	# of moves
Anxiety	Continuous	1.60 (2.99)	0 – 13 (score on CIDI-SF anxiety scale)
Depression	Continuous	1.26 (2.20)	0 – 8 (score on CIDI-SF depression scale)
Informal Social Control	Continuous	2.74 (1.10)	0 – 6 (composite of positive responses to the existence of forms of informal social control)
Antisocial Tendencies	Ordinal	3.68 (2.23)	0 – 12 (score on 4 questions regarding antisocial thinking and actions)
Perceptions of Fairness	Ordinal	.50 (.75)	0 – 3 (Score from item "I feel like I am being pushed around in life")
Formal Recidivism	Continuous	1.85 (2.41)	# of self-reported charges or convictions
Any Recidivism	Continuous	2.72 (3.24)	# of self-reported instances of any criminal behavior

Perceptions of Fairness

This variable is made up of the response to the item: *I feel that the world is*

pushing me around which is found in wave five of the FF data. The response scale for

this question ranges from 1 to 4 with 1 = strongly disagree and 4 = strongly agree. These

items were recoded to range from 0 to 3 with 0 = strongly disagree and 3 = strongly

agree. Higher scores indicate an increased sense that participants view their experiences

in life as burdensome or unfair (See Table 5.4).

Outcome Variables

Formal Recidivism: This variable is made up of the number self-reported charges and convictions for any crime occurring in the waves subsequent to the wave of a participants first reported drug charge or conviction

Any Recidivist Criminal Behavior: This variable is made up of the number of self-reported charges, convictions, instances of drug use, instances of other criminal behavior such as selling drugs or prostitution that occurs in the waves following the wave of a participants first reported drug charge or conviction. Table 5.4 provides descriptive statistics for the main explanatory variables and the two outcome variables.

5.4 Analyses

OLS Regression

This study incorporates two types of analyses. First are two series of OLS regressions looking at the direct relationships between the controls, housing instability, and the GST variables with both formal recidivism and any recidivist criminal behavior. OLS regression is appropriate in this case as both outcomes are measured continuously. The OLS models are run using STATA version 15 where the first model in both series incorporates control variables only (model 1), followed by models that introduce the measures for housing instability (model 2), negative emotions (model 3), informal social control, antisocial tendencies, and perceptions of fairness (model 4), and then six interactions between each negative emotion variable and informal social control,

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antisocial tendencies, and perceptions of fairness to test for moderation (model 5). This

results in a sequence of five models for each recidivism outcome (See Figure 5.1).

Figure 5.1.

OLS Regression Models

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┌─────────────────────────┐
│   Controls (Model 1)     │
├─────────────────────────┤
│  + Housing Instability   │
│       (Model 2)          │
├─────────────────────────┤
│     + Depression &       │                  ┌──────────────────────┐
│   Anxiety (Model 3)      │                  │  Formal Recidivism/  │
├─────────────────────────┤                  │    Any Recidivist    │
│   + Informal Social      │                  │  Criminal Behavior   │
│   Control (ISC),         │                  └──────────────────────┘
│     Antisocial           │
│  Tendencies (AT), &      │
│    Perception of         │
│    Fairness (PF)         │
│      (Model 4)           │
├─────────────────────────┤
│    + Dep*ISC,            │
│      Dep*AT,             │
│      Dep*PF,             │
│      Anx*ISC,            │
│      Anx*AT, &           │
│       Anx*PF             │
│      (Model 5)           │
└─────────────────────────┘
```
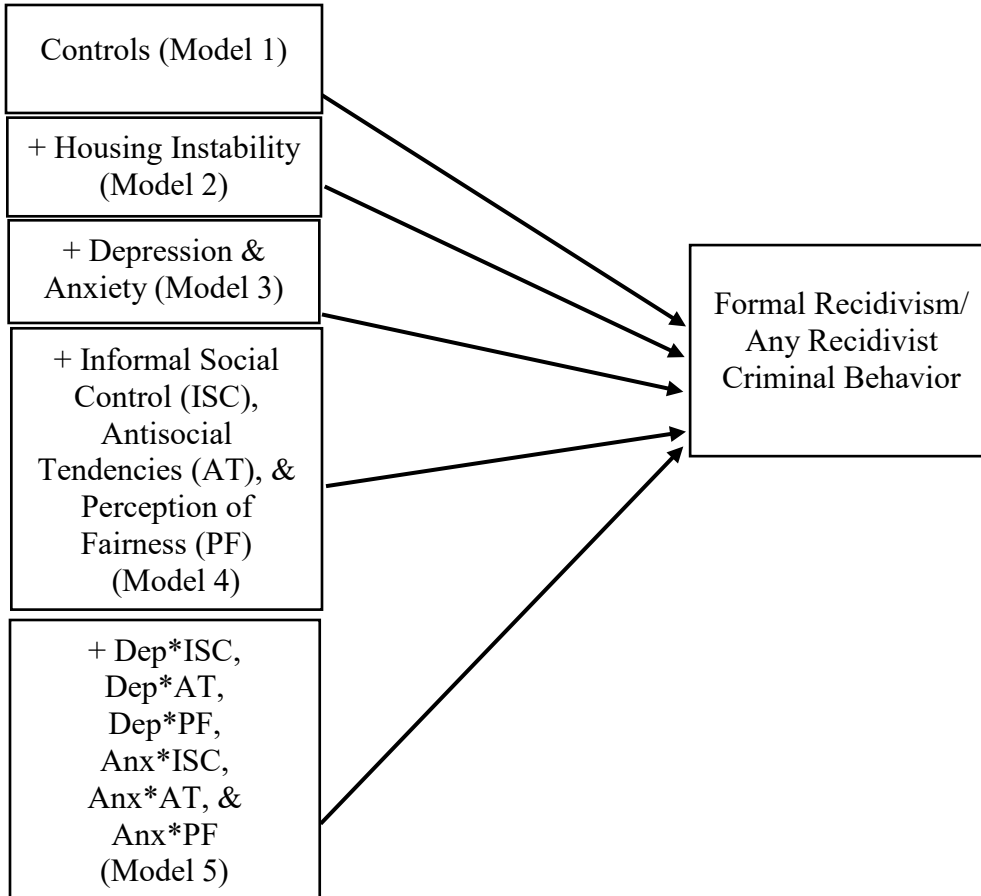
Testing for moderation is common in the GST literature as a method to assess for

more complex relationships in the data (Ackerman, 2009; Agnew, 2006; Jang & Rhodes,

2012). For moderation to occur models including both the independent variable(s) and

their suspected moderator(s) are incorporated (model 4). If the independent variables and

suspected moderators are significant in those models, then a subsequent model is run in

which independent variables are paired with their moderators in interaction terms to test

for moderated effects (model 5). If the new models have a significant increase in R^2 and show significant relationships between the interactions and the outcome variables, then there is evidence of moderation which can be explored further using graphs depicting the different patterns in the data at different values of the moderator (Aiken & West, 1991).

In order to use weighted data in STATA one must declare the data as survey data and specify the weight variable and type of variance estimation. The FF study built 10 replicate weights for the 20-city sample and requires the use of jackknife variance estimation. When using the survey command for weighted data in STATA most standard postestimation commands for regression diagnostics are not available. However, some post-estimation diagnostics tests of linearity, normality, multicollinearity, and independence were still possible.

OLS Diagnostics

Scatterplots and patterns in the data showed that independent variables have a linear relationship with the dependent variable in the case of both the formal recidivism and any recidivist criminal behavior outcomes. In assessing variance inflation factor (VIF) and tolerance for multicollinearity, VIF above 10 and tolerance below .10 are considered problematic (Institute for Digital Research and Education, n.d.). The VIF ranged from 1.07 to 1.61 with a mean of 1.30 in the models incorporating all variables without interactions for both outcomes. Tolerance statistics were also indicative of a lack of multicollinearity as they ranged from .92 to .62 with an average of .79. The Shapiro Wilk test of normality indicated that the residuals were normally distributed in both the formal recidivism model ($p = .18$) and the any recidivist behavior outcome model ($p =$

.15). The insignificant p-values indicate a failure to reject the null hypothesis that the data are normally distributed.

Lastly, to test for the independence of the residuals in both models, a simulated time series analysis was incorporated to run the Durbin-Watson test for autocorrelation. Time series analyses are a case in which the assumption of independence of the residuals of observations may often be broken as observations are typically gathered from the same subject across a given period of time. If autocorrelation is present it suggests that these observations are correlated and therefore not independent. Durbin-Watson statistics, which range from 0 – 4, of 1.5 – 2.5, are considered acceptable with scores of 2 indicating a complete lack of autocorrelation (Field, 2009). To run a simulated time series analysis for this study, the case id number (1 – 328) is used as the time variable and the residuals are used as the observations. This allows the Durbin-Watson statistic to assess whether correlation is present across the residuals for the observed values of both formal recidivism or any recidivist behavior for each participant, depending on the model (Issues of Independence, 2019). This resulted in a Durbin-Watson statistic of 2.04 in the formal recidivism model and 2.07 in the any recidivist behavior model indicating nearly no correlation between the residuals in either model, and providing statistical evidence of the independence of residuals (Field, 2009).

Path Analysis

Path models are used to explore the more complicated relationships posited by GST between strain and the two different criminal behavior outcomes. Path analysis is a special case of Structural Equation Modeling (SEM) and differs from SEM in that path

analyses contain only observed variables that were directly measured in the data. SEM and path analyses are often used when researchers are testing complex theories in which multiple constructs are theorized to impact an outcome variable through intertwined relationships (Byrne, 2012).

Path models allow researchers to look at direct and indirect relationships between variables by estimating coefficients between each proposed path hypothesized to be important. These models build on the direct relationships in the OLS models and allow for testing of any mediation or moderated mediation in relationships suggested by GST. GST certainly suggests that strain, negative emotions, informal social control, antisocial tendencies and perceptions of fairness have a direct relationship with criminal behavior (Agnew, 2006). However, it also suggests that strain's (housing instability & strain) relationship with criminal behavior (formal recidivism & any recidivist behavior) is mediated by negative emotions (anxiety & depression) and that the severity of negative emotions is influenced by levels of informal social control, antisocial tendencies, and perceptions of fairness.

Past researchers have stressed the importance of testing for mediation when incorporating GST, as much of the existing research solely incorporates interactions in regression analyses to test for moderation (Ackerman, 2009; Agnew, 2006; Agnew, 2001; Jang & Rhodes; 2012). As such, this study incorporates path models used to explore multiple mediation, which are depicted in Figure 5.2.

Multiple Mediation

Multiple mediation analysis allows for a similar assessment of the direct relationships in OLS regressions but also allows researchers to explore the relationships between independent variables while testing for the presence of significant indirect relationships. This is particularly important when dealing with complex theories like GST in which variables are posited to have a range of possible relationships. In the case of the multiple mediation analysis (see Figure 5.2) we can assess if the relationships between both strain or housing instability and both recidivism measures are mediated by anxiety, depression, informal social control, antisocial tendencies, or perceptions of fairness.

For mediation to occur there needs to be a significant relationship between the main independent variable and an outcome (in this case housing instability or strain and recidivism). That relationship is said to be mediated if the introduction of other variables impacts that relationship. Full mediation would occur if housing instability or strain has a significant relationship with a proposed mediator, the mediator has a significant relationship with recidivism, and the direct relationship between housing instability or strain and recidivism is no longer significant. Partial mediation would occur when the direct relationship between housing instability or strain and recidivism maintains significance.

Moderated Mediation

GST also calls for exploration of the moderating effect of informal social control, antisocial tendencies, and perceptions of fairness, on the relationship between negative

emotions and criminal behavior. This relationship can be best explored by assessing for

moderated mediation. Models that account for moderation in the relationship between

negative emotions and behavioral outcomes have been notably lacking in prior GST

research (Agnew, 2006; Jang & Rhodes, 2012). As such, this study adds to the literature

Figure 5.2.

Multiple Mediation Path Models
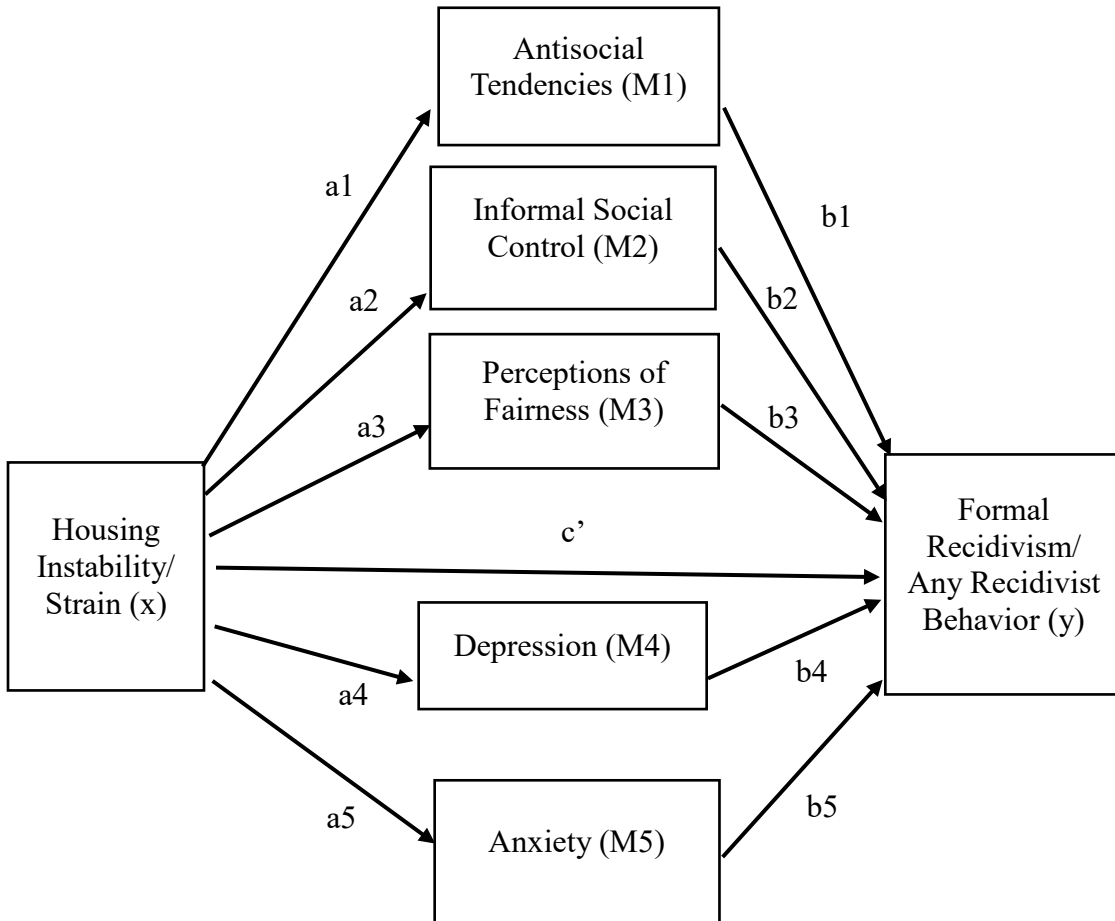
on GST by incorporating path models that assess the existence of moderated mediation in

the overall relationship between housing instability (or strain) and recidivist criminal

behavior (See Figure 5.3). To account for this effect, six two-way interactions were

developed and used in the OLS regressions to assess moderation and the path models to

assess moderated mediation. These interactions are between depression and informal

social control, depression and fairness, depression and antisocial tendencies, anxiety and

informal social control, anxiety and fairness, and anxiety and antisocial tendencies.

Figure 5.3

Model Diagram for Moderated Mediation (Stride, et al., 2015)
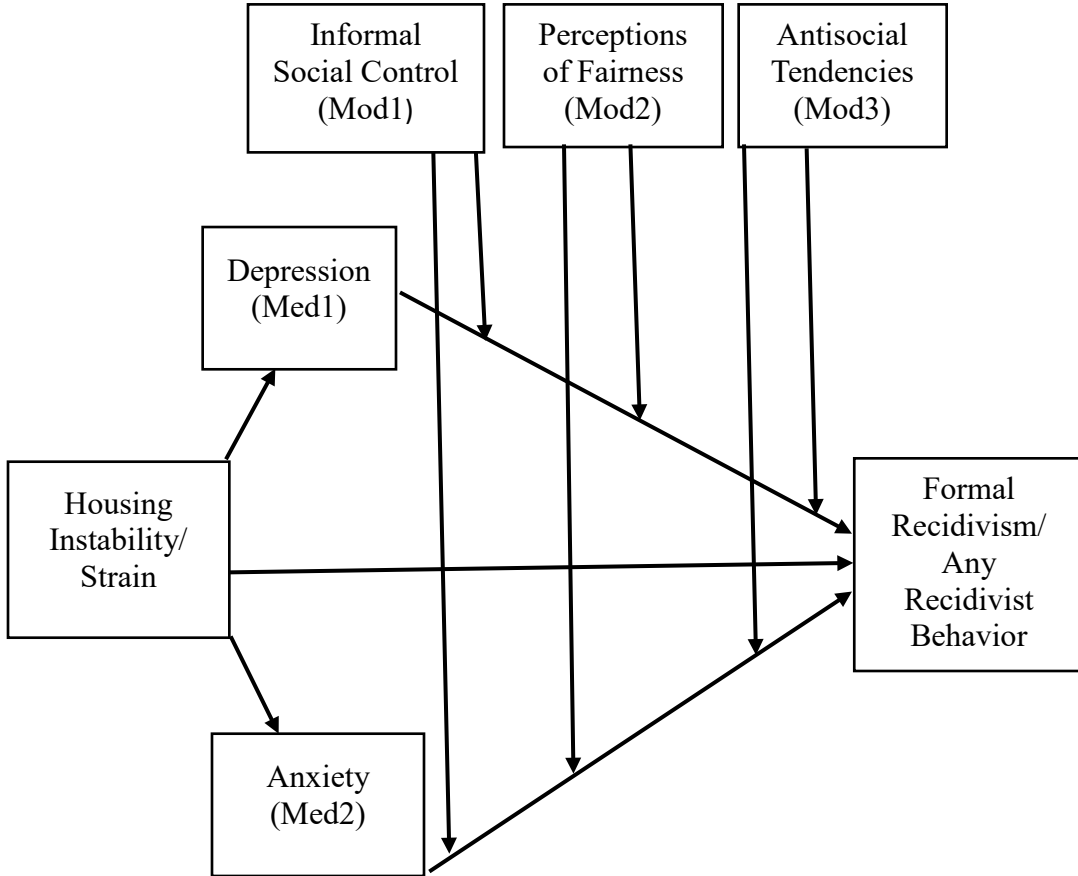
These models, although complex, are straightforward to interpret. GST suggests

that people are more likely to turn to criminal coping to deal with the negative emotions

produced by strain (i.e. housing instability) when they have limited informal social

control, elevated levels of antisocial tendencies or associations, and, particularly, when

they view their experience of life or a given strain as unfair (See Figure 3.1). Thus, for

example, as housing instability increases, the combination of higher depression or anxiety scores with lower levels of informal social control, higher levels of antisocial tendencies, and higher scores on the perception of unfairness should be associated with increases in recidivist behavior. In contrast, as both housing instability and negative emotion scores increase but informal social control is high and both antisocial tendencies and perceptions of unfairness are low, one would expect that there would be an insignificant increase (or even a decrease) in formal recidivism or any recidivist criminal behavior if moderated mediation is taking place as prescribed by GST. By using the combination of these interactions in both models, this study can assess if the indirect relationships from housing instability (or strain) through either anxiety or depression to either recidivism measure are significant at 27 different combinations of high, medium and low values of informal social control, antisocial tendencies, and perceptions of unfairness. Results with this specificity will allow for more targeted policy and intervention approaches moving forward and may provide for some precise directions for future research.

To run accurate moderation analyses the variables that are included in interactions need to be centered in order to avoid multicollinearity with the interactions (Aiken & West, 1991). The method used in this study is centering variables around the mean. Then values representing high, medium, and low levels for the variables hypothesized to be moderators in this study were created by incorporating the new means (0), along with values at both one standard deviation below and above that mean (Fitzsimmons, 2008). Establishing low, medium, and high levels for these variables allows for a more robust test of the interactions of both anxiety and depression with, in this instance, 27 different

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combinations of the three different levels of informal social control, antisocial attitudes, and perceptions of fairness. The low, medium, and high values of each variable are available in Table 5.5 (note: the low value for perceptions of fairness would have been outside the possible range of values so the minimum possible value was used instead; Fitzsimmons, 2008).

Table 5.5.

Low, Medium, & High Values of Interaction Variables

Variable	Low Value	Medium Value	High Value
Informal Social Control	-1.10	.00	1.10
Antisocial Tendencies	-2.23	.00	2.23
Perceptions of Fairness	-.50	.00	.75

All path models were run using MPlus version 8 as it is software developed specifically to work with path models and more complex SEM models and it allows for weighting of data from complex survey designs (Muthen & Muthen, 1998-2017). However, most standard tests of goodness of fit are unavailable for weighted data in MPlus. As such only standardized root mean squared residual (SRMR) is reported with values of .08 or less indicating acceptable goodness of fit (Apsarouhov & Muthen, 2018). SRMR ranged from .06 in the multiple mediation models to .08 in both moderated mediation models.

Stride, Gardner, Catley, and Thomas (2015) have developed syntax for MPlus to run complex path analyses that include models incorporating multiple mediators and moderators in a range of relationships. These models are based on the PROCESS macro developed by Hayes (2013) but with the intent of being able to run the more complex

types of analyses allowed by MPlus. This dissertation incorporates models based off the syntax made available for cases when it is proposed that the specific path between mediators and the outcome variable are moderated by multiple other variables (Figure 5.3). The outcomes produced by the syntax provide statistical results for the specific indirect effects for each available combination of low, medium, and high values of the moderating variables. Again, for this study, that entails the assessment of the indirect effects of housing instability (or strain) through depression or anxiety on either formal recidivism or any recidivist behavior at 27 different possible combinations of high, medium, and low values of informal social control, antisocial tendencies, and perceptions of unfairness.

Chapter 6: Results

6.1 OLS Regression

Any Recidivist Criminal Behavior

Results indicate housing instability did not have a significant relationship with the outcome in the models assessing the relationship with any recidivist criminal behavior. Also, moderation was not supported in the last model as the interactions were insignificant and there was no significant increase in R^2 (.31 to .33) from the previous model incorporating all 14 variables. This is to be expected as none of the suspected moderators had a significant relationship with the outcome in model four. As such, running the fifth model both in OLS analyses only serves to provide more evidence of the lack of moderation and therefore the outcomes from model four in both analyses are the focal point of these OLS results. It should also be noted that to perform moderation analyses appropriately, depression, anxiety, informal social control, antisocial tendencies, and perceptions of fairness were all centered at their mean before being multiplied together to form the interactions. This was done in order to avoid multicollinearity (Aiken & West, 1991). The centered variables were only used when testing for moderation in model five for both recidivism outcomes (See Table 6.1).

Throughout most of the models the wave of the 1st drug offense and a previous conviction both had a significant relationship with the any recidivist criminal behavior

Table 6.1.

OLS Regression for Any Recidivism

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Black	.24(1.03)	.12(1.03)	.18(1.06)	.26(.99)	.35(.98)
Age	-.12(.06) #	-.11(.06) #	-.11(.06)	-.12(.05) #	-.13(.05) *
Education	-.78(.59)	-.76(.61)	-.71(.59)	-.54(.58)	-.33(.50)
Wave	-1.16(.45) *	-1.29(.48) *	-1.37(.46) *	-1.68(.36) **	-1.53(.28) ***
Income	-.02(.14)	-.01(.13)	-.01(.14)	-.05(.13)	-.07(.12)
Incarceration	.15(1.07)	.19(1.01)	.25(.98)	.35(.90)	.29(.81)
Conviction	1.57(.78) #	1.70(.73) *	1.70(.74) *	1.80(.71) *	1.75(.70) *
Strain	.39(.29)	.36(.33)	.39(.28)	.49(.25) #	.55(.21) *
Housing Instability		.39(.31)	.29(.31)	.37(.27)	.44(.20) #
Depression			.15(.23)	.09(.23)	.04(.20)
Anxiety			-.13(.15)	-.15(.15)	-.16(.19)
Informal SC				-.51(.33)	-.54(.32)
Antisocial				.14(.17)	.14(.17)
Life Unfair				.47(.50)	.51(.40)
Dep*InfSC					-.08(.14)
Dep*Fair					-.13(.32)
Dep*Anti					.09(.05)
Anx*InfSC					.12(.07)
Anx*Fair					.06(.13)
Anx*Anti					.02(.04)
Constant	7.18(3.40) #	6.30(3.21) #	6.40(3.55)	6.17(2.96) #	5.35(2.75) #
R2	.21	.23	.25	.31	.33

Note: Coefficient (Standard Error) # = p < .10; * = p <.05; ** = p < .01; ***= p < .001

outcome. More recent drug offenses were associated with 1.68 fewer instances of

recidivist criminal behavior on average and a previous conviction was associated with

1.80 more instances of recidivist criminal behavior on average in the full model (4).

Older age was marginally associated with a .12 decrease in instances of any recidivist

behavior on average for each year older a participant reported being at the time of their

first drug offense. Strain was marginally associated to any recidivist criminal behavior

with each additional strain in the full model (4) resulting in an increase of .49 instances of

any recidivist criminal behavior on average, indicating a small but meaningful effect as

experiencing all six strains would result in an additional three instances of any recidivist

criminal behavior on average. This finding also lends some evidence for GST overall

(See Table 6.1).

Formal Recidivism

The results for the models assessing the formal recidivism outcome suggest that

there was some evidence that housing instability is associated with an increase in new

charges or convictions. In model four, which incorporates all the control and independent

variables, housing instability was associated with a .40 increase in new charges or

convictions. In essence, this indicates that each move in the previous 12 months results in

.40 new crimes or charges on average. This may may not be a large amount for those in

the sample who moved closer to the mean of around one time, but for those moving

multiple times it results in significantly more new charges and convictions (See Table

6.2).

Informal social control was associated with a decrease of .53 new charges or

convictions for each element of informal social control in a participant's life on average.

Again, there is a small but meaningful effect – although in the opposite direction as strain

and housing instability – as having all six elements of informal social control would

result three less new charges or convictions on average. Anxiety was marginally

associated with a decrease in new charges or convictions, but the effect is minimal

considering that each positive response on the CIDI-Anxiety scale resulted in .17 less

new crimes or charges on average. However, the relationship is the opposite of what GST

suggests and will thus be explored further in the discussion (See Table 6.2).

Table 6.2.

OLS Regression for Formal Recidivism Multiple Mediation Analysis

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Black	.19(.71)	.05(.72)	.10(.74)	.12(.60)	.16(.63)
Age	-.07(.03) #	-.06(.04)	-.06(.04)	-.07(.04) #	-.08(.03) *
Education	-.35(.36)	-.32(.37)	-.26(.35)	-.14(.30)	-.07(.30)
Wave	-.71(.33) #	-.85(.36) *	-.94(.34) *	-1.22(.30) **	-1.14(.27) **
Income	-.01(.11)	-.02(.10)	-.01(.10)	-.07(.09)	-.06(.08)
Incarceration	.03(.85)	.01(.77)	.07(.75)	.19(.65)	.19(.54)
Conviction	.76(.63)	.91(.59)	.90(.59)	.98(.54)	.90(.58)
Strain	.07(.21)	.03(.23)	.09(.16)	.16(.18)	.24(.13) #
Housing Instability		.45(.24)	.34(.21)	.40(.16) *	.43(.11) **
Depression			.14(.19)	.11(.18)	.04(.17)
Anxiety			-.14(.09)	-.17(.09) #	-.17(.11)
Informal SC				-.53(.14) **	-.49(.16) *
Antisocial				.14(.13)	.12(.13)
Life Unfair				.11(.25)	.31(.22)
Dep*InfSC					-.07(.11)
Dep*Fair					.07(.04)
Dep*Anti					-.08(.23)
Anx*InfSC					.04(.05)
Anx*Fair					.001(.04)
Anx*Anti					-.07(.11)
Constant	4.72(1.99) *	3.71(1.90) #	3.86(2.17)	4.34(1.73) *	3.57(1.71) #
R2	.14	.17	.21	.30	.32

Note: Coefficient (Standard Error) # = p < .10; * = p <.05; ** = p < .01; ***= p < .001

More recent drug offenses were associated with 1.22 less new charges or convictions and older age was marginally associated with a .07 decrease in new charges or convictions on average for each year older a participant reported being at the time of their first drug offense (See Table 6.2).

Moderation was not supported as the interactions do not have a significant relationship with formal recidivism and there was no significant change in R^2 between the models (See Table 6.2). Overall, there is more evidence to support GST in the formal recidivism models with both informal social control and housing instability adhering to hypothesized relationships, yet the relationship between anxiety and recidivism is

opposite of what one would expect according to GST. However, anxiety is only

marginally associated with formal recidivism, has a limited effect, and its relationship

with criminal behavior remains murky in the literature on GST.

<center>6.2 Path Analyses</center>

Multiple Mediation

The first two path analyses explore multiple mediation for both formal recidivism

and any recidivist criminal behavior.

Direct effects: The direct effects for formal recidivism line up with the results

from the OLS regression in that age, wave of offense, anxiety, and informal social control

are all associated with fewer new charges and convictions. Housing instability a previous

conviction are both associated with more new charges and arrests (See Table 6.3).

Multiple mediation models also require testing direct relationships between

controls, explanatory variables, and outcomes. In both the formal recidivism model and

the model testing any recidivist criminal behavior, results suggest that identifying as

Black is associated with increased depression, while strain is marginally associated with

increased depression and being older is associated with lower depression scores. Similar

relationships exist regarding the direct relationships to anxiety. Older participants score

significantly lower and strain is marginally associated with higher anxiety scores. The

findings that strain is marginally associated with higher scores on both measures of

negative emotions provides some support for GST in that strain is hypothesized as

inducing the negative emotions that some people cope with through criminal behavior

(Agnew, 2005).

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Other significant findings are that income is associated with higher levels of informal social control. Older participants and those with prior convictions report significantly lower antisocial tendencies, while a more recent drug offense is associated with higher antisocial tendencies (See Table 6.3)

In the multiple mediation model assessing the outcome of any recidivist criminal behavior the direct results are also similar to those from the OLS regression models but offer some new evidence to support the hypotheses and GST. Here the results suggest that older participants and those with more recent drug offenses report significantly fewer instances of recidivist criminal behavior, while previous convictions and strain are associated with increases in recidivist criminal behavior (See Table 6.3)

Mediation (indirect effects): The direct effects are important to keep in mind when assessing whether the proposed mediated relationship exists between the strain measures and formal recidivism through the negative emotion measures, informal social control, antisocial tendencies, or perceptions of fairness. Again, for mediation to occur there needs to be significant relationships between the explanatory variable and the outcome variable, the explanatory variable and the proposed mediator(s), and the mediator(s) and the outcome variable. Full or partial mediation is determined by the impact on the relationship between the explanatory variable and the outcome variable. Full mediation occurs when the significant relationship no longer exists, and partial mediation occurs when the direct relationship remains significant. Both types of mediation still require significant relationships exist between the explanatory variable and the mediator(s) and the mediator(s) and the outcome variable.

Table 6.3

Direct Effects Mediation Path Models

Variable	Formal Recidivism	Any Recidivism	Depression	Anxiety	Informal SC	Antisocial	Life Unfair
			Path Outcomes				
Black	.12(.57)	.26(.94)	.78(.38) *	.40(.66)	.06(.51)	.44(.45)	.00(.05)
Age	-.07(.03) *	-.12(.05) *	-.06(.03) *	-.06(.03) *	-.03(.04)	-.08(.03) *	.01(.01)
Education	-.14(.29)	-.54(.55)	.62(.63)	1.03(1.07)	.08(.16)	-.16(.29)	.03(.05)
Wave	-1.22(.29) ***	-1.86(.34) ***	-.19(.27)	-.82(.63)	-.14(.25)	1.19(.35) **	.06(.05)
Income	-.07(.09)	-.05(.13)	-.10(.12)	-.11(.16)	.09(.05) *	-.08(.09)	-.01(.01)
Incarceration	.19(.61)	.35(.86)	-.26(.68)	.17(.81)	.15(.36)	.30(.76)	-.03(.06)
Conviction	.98(.51) #	1.79(.67) **	-.43(.58)	-.49(.63)	.01(.32)	-.65(.19) **	-.05(.06)
Strain	.16(.17)	.49(.23) *	.66(.35) #	.96(.52) #	.08(.12)	.15(.16)	-.02(.02)
Housing Instability	.40(.15) **	.37(.26)	.22(.32)	-.54(.45)	.08(.18)	-.14(.22)	-.02(.03)
Depression	.11(.17)	.09(.22)					
Anxiety	-.17(.09) *	-.16(.14)					
Informal SC	-.53(.14) ***	-.51(.32)					
Antisocial	.14(.12)	.14(.16)					
Life Unfair	.11(.24)	.47(.47)					
Constant	1.84(.73) *	1.95(.91) *	.95(1.10)	.89(1.36)	2.11(1.50)	2.51(.77) **	2.42(.95) *
R2	.31	.31	.22	.23	.09	.22	.05
SRMR	.06	.06					

Note: Coefficient (Standard Error) # = p < .10; * = p <.05; ** = p < .01; ***= p < .001

Taking these requirements into account, mediation is not supported in either analysis. Both the indirect relationship between moves and formal recidivism (β = .05, 95% CI [-.19, .29], β^* = .02) and moves and any recidivist criminal behavior (β = .04, 95% CI [-.24, .31], β^* = .01) through depression, anxiety, informal social control, antisocial tendencies, and perceptions of fairness are non-significant (See Table 6.4).

These insignificant relationships are made further evident in both models when considering that housing instability (moves) is not significantly associated with depression, anxiety, informal social control, antisocial tendencies, or perceptions of fairness; making a mediated relationship impossible (See Table 6.3).

Although strain is technically considered a control in this study, GST suggests that any form of strain's relationship to criminal behavior should be mediated by negative emotions, informal social control, antisocial behavior, or perceptions of fairness. As such, mediation in the relationship between the generic strain measure and the two recidivism measures was tested as well. Again, the lack of significance in key direct relationships indicated the indirect relationship between strain and both formal recidivism (β = -13., 95% CI [-.45, .19], β^* = -.07) and any recidivist criminal behavior (β = -.12, 95% CI [-.50, .26], β^* = -.05) would not be significantly mediated by depression, anxiety, informal social control, antisocial tendencies, or perceptions of fairness (See Table 6.4). For example, strain is not directly associated with formal recidivism making mediation impossible in that model. Also, although strain is directly associated with any recidivist criminal behavior and marginally associated with both depression and anxiety, neither depression or anxiety is directly associated with any recidivist criminal behavior in that model (See Table 6.3).

Moderated Mediation Analysis

Although the previous models used in this study indicate that there is no significant presence of mediation or moderation, the original hypotheses posited that the most accurate statistical representation of the pathways between variables presented in

GST would be a moderated mediation model. As such, using guidance from Stride, et al., (2015), a path model testing for moderated mediation was run for each of the recidivism outcomes (See Figure 5.3).

Table 6.4.

Indirect Effects Mediation Path Models

Moves on Formal Recidivism	Coefficient [95% CI]
Total Indirect Effect	.05 [-.17 .27]
Specific Indirect Effects	
Moves & Depression	.02 [-.09, .13]
Moves & Anxiety	.10 [-.06, .25]
Moves & Informal SC	-.04 [-.22, .14]
Moves & Life Unfair	-.01 [-.08, .07]
Moves & Antisocial	-.02 [-.09, .06]
Strain on Any Recidivist Criminal Behavior	**Coefficient [95% CI]**
Total Indirect Effect	-.13 [-.56, .29]
Specific Indirect Effects	
Strain & Depression	.06 [-.21, .33]
Strain & Anxiety	-.15 [-.45, .15]
Strain & Informal SC	-.04 [-.16, .08]
Strain & Life Unfair	-.02 [-.12, .08]
Strain & Antisocial	.02 [-.07, .11]

Note: # = p < .10; * = p <.05; ** = p < .01; ***= p < .001

Direct effects: Again, the results indicate that the direct effects in both models line up with the results from the OLS regression and the direct effects from the multiple mediation models. Age, wave of offense, and informal social control are all associated with fewer new charges and convictions, while housing instability is associated with an increase in new charges and arrests. Anxiety is marginally associated with fewer new charges or convictions in the formal recidivism model and a previous conviction is associated with more reported recidivism in the model assessing any recidivist behavior as the outcome (See Table 6.5).

In both the formal recidivism model and the model testing any recidivist behavior, results suggest that identifying as Black is associated with increased depression, while older participants report significantly lower depression scores. Other significant findings consistent with results from the multiple mediation model are that higher income is associated with higher levels of informal social control and that older participants and those with prior convictions report significantly lower antisocial tendencies. A more recent first drug offense is associated with increases in antisocial tendencies (See Table 6.5). Most of these results remain consistent across the different analyses and models, providing evidence for the hypotheses based on GST regarding direct relationships.

Moderated mediation (indirect conditional effects): As can be expected from the previous analyses in which moderating or mediating effects were not supported, moderated mediation at any combination of either depression or anxiety and the different levels of informal social control, antisocial tendencies, and perceptions of fairness was not supported (See Tables 6.6 and 6.7 for detailed results). This is consistent with Jang & Rhodes (2012) who also note the current dearth of studies testing these relationships and the difficulties doing so with secondary data.

6.3 Summary

Overall the analyses provide some preliminary support for the direct relationship between housing instability and formal recidivism among PCDR. The results also provide some supportive evidence for the major propositions of GST: there is direct relationship between strain and both depression and anxiety, as well as between strain and any recidivist criminal behavior. Informal social control is also consistently associated with

Table 6.5.

Direct Effects Moderated Mediation Models

Variable	Path Outcomes						
	Formal Recidivism	Any Recidivism	Depression	Anxiety	Informal SC	Antisocial	Life Unfair
Black	.16(.60)	.35(.93)	.78(.38) *	.40(.65)	.06(.50)	.52(.44)	.22(.15)
Age	-.08(.03) *	-.13(.05) **	-.06(.03) *	-.06(.03) *	-.03(.04)	-.07(.03) *	-.01(.02)
Education	-.07(.29)	-.33(.48)	.62(.63)	1.02(1.07)	.07(.17)	-.17(.30)	-.10(.13)
Wave	-1.14(.26) ***	-1.53(.27) ***	-.19(.27)	-.82(.63)	-.09(.26)	1.18(.30) ***	.10(.11)
Income	-.06(.08)	-.06(.11)	-.10(.12)	-.12(.16)	.10(.04) *	-.07(.09)	-.03(.03)
Incarceration	.19(.51)	.30(.77)	-.26(.68)	.17(.81)	.16(.33)	.27(.73)	.02(.19)
Conviction	.90(.55)	1.75(.66) **	-.43(.58)	-.50(.64)	-.03(.28)	-.63(.21) **	-.06(.16)
Strain	.24(.13) #	.55(.20) **	.66(.35) #	.96(.52) #			
Housing Instability	.43(.10) ***	.45(.19) *	.22(.32)	-.54(.45)			
Depression	.04(.16)	.04(.19)					
Anxiety	-.17(.11)	-.16(.19)					
Informal SC	-.49(.15) **	-.54(.30) #					
Antisocial	.12(.12)	.14(.16)					
Life Unfair	.31(.21)	.51(.38)					
Dep*InfSC Dep*Fair Dep*Anti	-.07(.11) -.08(.21) .07(.04)	-.08(.13) -.13(.30) .09(.05)					
Anx*InfSC Anx*Fair Anx*Anti	.05(.05) -.07(.10) .001(.04)	.12(.07) .06(.13) .02(.04)					
Constant R2	3.57(1.63) * .33	5.35(2.61) * .34	.99(2.38) .22	1.55(3.33) .23	-.03(1.73) .09	1.73(1.87) .22	.33(.56) .04
SRMR	.08	.08					

Note: Coefficient (Standard Error) # = p < .10; * = p <.05; ** = p < .01; ***= p < .001

fewer new charges or convictions. However, in these analyses, anxiety was found to have

the opposite relationship that is posited by GST in that it was marginally associated with

less formal recidivism. Some of the GST literature suggests that anxiety, although it is a

negative emotion, may be linked more to self-destructive behavior such as substance use

or self-mutilation, as opposed to acting-out aggressively, which may not always result in formal contact with the criminal justice system (Ackerman, 2009; Ackerman & Sacks 2012; Agnew, 2006; Agnew, 2001; Jang & Rhodes, 2012), this will be considered in more depth in the discussion section.

Table 6.6.

Conditional Indirect Effects of Moves on Formal Recidivism

Depression	Coefficient [95% CI]	Anxiety	Coefficient [95% CI]
Low InfSC		Low InfSC	
Low Anti & Low Fair	.06 [-.22, .32]	Low Anti & Low Fair	.04 [-.39, .48]
Low Anti & Med Fair	.07 [-.24, .36]	Low Anti & Med Fair	.03 [-.35, .45]
Low Anti & High Fair	.08 [-.29, .44]	Low Anti & High Fair	.03 [-.31, .42]
Med Anti & Low Fair	.02 [-.09, .13]	Med Anti & Low Fair	.12 [-.09, .34]
Med Anti & Med Fair	.03 [-.10, .15]	Med Anti & Med Fair	.12 [-.09, .34]
Med Anti & High Fair	.04 [-.13, .21]	Med Anti & High Fair	.12 [-.09, .33]
High Anti & Low Fair	-.02 [-.19, .17]	High Anti & Low Fair	.21 [-.18, .58]
High Anti & Med Fair	-.02 [-.18, .17]	High Anti & Med Fair	.21 [-.16, .55]
High Anti & High Fair	-.003 [-.16, .17]	High Anti & High Fair	.21 [-.15, .53]
Med InfSC		Med InfSC	
Low Anti & Low Fair	.04 [-.22, .29]	Low Anti & Low Fair	.01 [-.35, .39]
Low Anti & Med Fair	.05 [-.23, .30]	Low Anti & Med Fair	.01 [-.35, .39]
Low Anti & High Fair	.06 [-.24, .34]	Low Anti & High Fair	.01 [-.36, .40]
Med Anti & Low Fair	.00 [-.08, .08]	Med Anti & Low Fair	.09 [-.09, .27]
Med Anti & Med Fair	.01 [-.08, .09]	Med Anti & Med Fair	.09 [-.09, .27]
Med Anti & High Fair	.02 [-.09, .13]	Med Anti & High Fair	.09 [-.09, .27]
High Anti & Low Fair	-.04 [-.21, .14]	High Anti & Low Fair	.18 [-.19, .52]
High Anti & Med Fair	-.03 [-.19, .15]	High Anti & Med Fair	.18 [-.19, .51]
High Anti & High Fair	-.02 [-.17, .15]	High Anti & High Fair	.18 [-.18, .50]
High InfSC		High InfSC	
Low Anti & Low Fair	.02 [-.24, .27]	Low Anti & Low Fair	-.02 [-.33, .31]
Low Anti & Med Fair	.03 [-.24, .28]	Low Anti & Med Fair	-.02 [-.36, .33]
Low Anti & High Fair	.05 [-.25, .30]	Low Anti & High Fair	-.02 [-.42, .39]
Med Anti & Low Fair	-.02 [-.14, .10]	Med Anti & Low Fair	.07 [-.09, .21]
Med Anti & Med Fair	-.01 [-.12, .09]	Med Anti & Med Fair	.07 [-.09, .21]
Med Anti & High Fair	.01 [-.10, .10]	Med Anti & High Fair	.07 [-.10, .21]
High Anti & Low Fair	-.06 [-.30, .19]	High Anti & Low Fair	.15 [-.21, .46]
High Anti & Med Fair	-.05 [-.24, .16]	High Anti & Med Fair	.15 [-.22, .48]
High Anti & High Fair	-.04 [-.20, .15]	High Anti & High Fair	.15 [-.25, .52]

Note: # = p < .10; * = p <.05; ** = p < .01; ***= p < .001

Although some support for some GST relationships were found, more complex relationships posited by GST were not supported, thus the overall results hardly provide unequivocal support for GST in total. Regardless, there is certainly some evidence that supports the more basic hypotheses regarding the role of housing instability, informal

social control, and strain in recidivism among PCDR that should prove useful for future

research, along with both policy work and interventions moving forward.

Table 6.7.

Conditional Indirect Effects of Strain on Any Recidivist Behavior

Depression	Coefficient [95% CI]	Anxiety	Coefficient [95% CI]
Low InfSC		Low InfSC	
Low Anti & Low Fair	.25 [-.61, 1.05]	Low Anti & Low Fair	-.42 [-1.26, .40]
Low Anti & Med Fair	.28 [-.63, 1.16]	Low Anti & Med Fair	-.41 [-1.24, .44]
Low Anti & High Fair	.33 [-.71, 1.37]	Low Anti & High Fair	-.39 [-1.22, .52]
Med Anti & Low Fair	.06 [-.20, .31]	Med Anti & Low Fair	-.30 [-.76, .19]
Med Anti & Med Fair	.09 [-.18, .36]	Med Anti & Med Fair	-.29 [-.74, .18]
Med Anti & High Fair	.14 [-.17, .45]	Med Anti & High Fair	-.27 [-.72, .18]
High Anti & Low Fair	-.13 [-.85, .64]	High Anti & Low Fair	-.18 [-.50, .20]
High Anti & Med Fair	-.10 [-.83, .67]	High Anti & Med Fair	-.17 [-.51, .18]
High Anti & High Fair	-.06 [-.82, .73]	High Anti & High Fair	-.15 [-.57, .21]
Med InfSC		Med InfSC	
Low Anti & Low Fair	.19 [-.61, .96]	Low Anti & Low Fair	-.29 [-1.03, .45]
Low Anti & Med Fair	.22 [-.59, 1.01]	Low Anti & Med Fair	-.28 [-1.02, .45]
Low Anti & High Fair	.27 [-.57, 1.09]	Low Anti & High Fair	-.276[-1.00, .46]
Med Anti & Low Fair	-.003 [-.25, .26]	Med Anti & Low Fair	-.17 [-.54, .20]
Med Anti & Med Fair	.03 [-.20, .27]	Med Anti & Med Fair	-.16 [-.53, .20]
Med Anti & High Fair	.08 [-.24, .31]	Med Anti & High Fair	-.14 [-.51, .21]
High Anti & Low Fair	-.19 [-1.02, .68]	High Anti & Low Fair	-.05 [-.42, .31]
High Anti & Med Fair	-.16 [-.96, .69]	High Anti & Med Fair	-.04 [-.40, .31]
High Anti & High Fair	-.11 [-.88, .70]	High Anti & High Fair	-.02 [-.38, .32]
High InfSC		High InfSC	
Low Anti & Low Fair	.13 [-.65, .91]	Low Anti & Low Fair	-.16 [-.81, .51]
Low Anti & Med Fair	.16 [-.61, .92]	Low Anti & Med Fair	-.15 [-.80, .48]
Low Anti & High Fair	.21 [-.58, .95]	Low Anti & High Fair	-.13 [-.82, .45]
Med Anti & Low Fair	-.06 [-.45, .34]	Med Anti & Low Fair	-.04 [-.36, .25]
Med Anti & Med Fair	-.03 [-.38, .34]	Med Anti & Med Fair	-.03 [-.35, .25]
Med Anti & High Fair	.02 [-.28, .34]	Med Anti & High Fair	-.01 [-.34, .27]
High Anti & Low Fair	-.26 [-.12, .81]	High Anti & Low Fair	.08 [-.42, .50]
High Anti & Med Fair	-.22 [-.114, .75]	High Anti & Med Fair	.09 [-.35, .49]
High Anti & High Fair	-.17 [-.96, .71]	High Anti & High Fair	.11 [-.25, .48]

Note: # = p < .10; * = p <.05; ** = p < .01; ***= p < .001

Chapter 7: Discussion

The results across models assessing formal recidivism suggest that housing instability and informal social control may play a meaningful role in understanding formal contact with the criminal justice system for people with criminal drug records (PCDR). This is not the case when assessing factors associated with self-reported criminal behavior among PCDR, although strain was associated with increased recidivism in those models. Three factors were important regardless of the outcome and conformed to findings from previous literature on recidivism and criminal behavior: younger participants, those whose first drug offenses occurred in earlier waves of data collection, and those with a previous criminal conviction were associated with more instances of both recidivism outcomes. One finding had the opposite relationship than the one hypothesized as those with higher anxiety had marginally fewer instances of formal recidivism.

This chapter will discuss the significant findings above and address other significant relationships between the independent variables. It then provides a discussion of the models evaluating mediation and moderated mediation and their implications for the utility of General Strain Theory (GST) when studying PCDR. Then the implications for practitioners, policy, and future research are discussed, followed by implications wit more specific relevance to social workers, along with the limitations stemming from the

data set and the research design. Ultimately, a brief summary is provided that brings together the important findings, their limitations, and their general implications.

7.1 Discussion of Significant Results

Housing Instability

The main variable of interest in this study was housing instability, which has been found to be an important factor in recidivism and criminal behavior in general (Bruce, et al., 2014; Evans & Porter, 2014; Hamilton, et al., 2015; Metraux & Culhane, 2004; Roman & Travis, 2004). The significant association of housing instability with formal recidivism in this study extends the literature, suggesting that housing is an important factor specifically for PCDR. Furthermore, by accounting for other stressors in PCDR's lives, this study provides preliminary evidence that housing instability may be one of the more important factors in understanding formal recidivism for PCDR.

Previous research and scholarly work suggest that much of the importance of stable housing as it relates to recidivism is precisely the privacy, security, and consistency that come with a predictable place to live (Baldry, et al., 2003; Bruce, et al., 2014; Clifasefi, et al., 2013; Ellison, et al., 2013; Walker, et al., 2014). These elements allow stable housing to function as a protective factor against arrests/charges for behaviors or offenses that are more obvious when done in public spaces such as drug use, drug-dealing, and sex-work. Furthermore, the lack of housing itself has been criminalized through anti-vagrancy ordinances that make behaviors such as sleeping on benches a citable offense. Ultimately, the fact that housing instability is significantly associated with formal recidivism as opposed to any self-reported criminal behavior in this study

makes sense as instable access to housing or a lack of private space often exposes people

to law enforcement which increases the possibility of new formal charges and convictions

(Dunlap, et al., 2010; Sanberg, 2012; Storr, et al., 2004)

Informal Social Control

GST suggests that higher levels of informal social control should be associated

with a reduction in criminal behavior and recidivism. The results of this study adhere to

that proposed relationship at least in the case of formal recidivism for PCDR.

Recent scholarly work and emerging theories around addiction and problematic

substance use suggest that social and emotional isolation contribute significantly to these

issues and that various forms of informal social control may help mitigate problematic

drug use and addiction (Alexander, 2008; Hari, 2015; Macy, 2018; Szalavitz, 2016).

Mino, et al. (2011) found that something as basic as registering to vote significantly

reduced risky drug using behavior among injection drug users in New York (Mino, et al.,

2011). Findings of this nature are hardly rare, and civic engagement has been associated

with a reduction in a range of risky substance use behaviors in populations ranging from

college students to injection drug users experiencing homelessness (Mino et al., 2011;

Talo et al., 2013). Furthermore, lower post-incarceration rates of recidivism have been

linked to access to employment, training, and education programs which all enhance

informal social control for incarcerated people after they leave prison or jail (Duwe &

Clark, 2014; Dechenes, et al., 2009). More exploration is needed to understand which

types of informal social control, whether they be concrete such as employment,

education, or volunteer work or more nebulous, such as having a supportive network of

friends and family, are most appropriate in addressing recidivism and other outcomes for justice system involved people and particularly for PCDR.

The findings from the current study highlight the positive role of informal social control in mitigating recidivism for PCDR and fit well with this study's hypotheses, as well as previous research. These findings also suggest the need for new channels of research into what forms of informal social control might provide the most benefit to PCDR. In the mediation models and the moderated mediation models, higher incomes were associated with higher levels of social control. This may provide some guidance in future efforts to increase levels of informal social control for PCDR. However, this might also be a bi product of the measure which included the ability to lend money, working, and being able to depend on others to borrow money which could simply indicate affluence or some sort of financial privilege.

Even if it is the case that more affluent PCDR have better outcomes, the combination of findings that higher levels of informal social control are associated with reductions in recidivism and higher incomes are associated with higher levels of informal social control suggest that policies that aim to restrict any legitimate income opportunities are at best counterproductive for PCDR. This relationship certainly requires further investigation, yet it would fit well with other research that suggests that wealth and income-building strategies can have transformative results for various groups of people experiencing poverty and other forms of social and economic marginalization (Birkenmaier, et al., 2016; Plassmeyer, Brisson, & Lechuga-Pena, 2017; Santiago, Glaster, & Smith, 2017; Sheradden, 2018; Sheradden, 1991) and that those with wealth

are often shielded from the more debilitating aspects of the criminal justice system

(Alexander, 2012; Taibbi, 2014).

Strain

The composite strain measure was marginally associated with more instances of

recidivist criminal behavior in the models that incorporated the more expansive measure

of recidivism. This provides some limited support for GST as an appropriate theoretical

perspective from which to investigate the experiences of PCDR. The fact that strain is

most closely associated with the outcome that directly measures behavior is also

consistent with GST's emphasis on predicting criminal or other negative coping

behaviors. This is not to say that arrests and convictions are not indicative of criminal

behavior, but that previous strain research has shown more generalized measures of strain

to be associated with a range of negative coping behaviors, such as drug use and sexual

promiscuity, that do not always necessarily entail criminal justice system involvement but

may be indicative of criminal behavior (Bishopp & Boots, 2014; Button & Worthen,

2014; Jang & Lyons, 2006; Piquero et al., 2010; Rebellon, et al., 2012; Sharp, et al.,

2001).

Higher levels of strain were also associated with higher scores on both the

depression and anxiety measures in both the mediation model and the moderated

mediation models. However, the specific indirect effect of strain through either anxiety or

depression was not significant indicating a lack of a mediated relationship as prescribed

by GST. Still there is some support here for the proposed relationships in GST as strain

seems to be associated with increases in self-reported levels of the negative emotion

measures for PCDR in this study. While this study focusses on the specific strain of housing stability, the findings that more instances of strain are associated with more reported overall recidivism suggests that researching which strains are most closely associated with general criminal behavior among PCDR would contribute to the literature.

Anxiety

Anxiety is marginally associated with a drop in formal recidivism which is the opposite relationship that GST suggests should be taking place. However, this finding is consistent with previous research not based on GST that notes that being withdrawn and nervous served as a protective factor from engaging in criminal behavior, particularly for younger people (Zara & Farrington, 2009). The research also notes that this effect tends to flatten out by the time participants turned 21. The fact that anxiety scores are significantly higher among younger participants in this study provides some corroborating evidence for the notion that anxiety may reduce criminal behavior among younger people.

Strain is also marginally associated with higher anxiety scores suggesting a complex relationship between anxiety and formal recidivism as both strain and being younger are associated with increased self-reported criminal behavior in general. However, much like housing can shield one from law enforcement regardless of involvement in criminal behaviors such as drug use, it is possible that social isolation or withdrawal from social situations may spare people with higher levels of anxiety from situations in which they face the consequences of law enforcement as well (Zara &

Farrington, 2009). Furthermore, of all the emotions tested in GST literature anxiety's relationship with criminal coping has the least conclusive evidence (Agnew, 2006).

7.2 Evidence for General Strain Theory

Overall there were some relationships consistent with a GST framework that were supported, while evidence for some others, particularly the more complex relationships, was lacking. The finding that strain is associated with increased instances of any recidivist criminal behavior fits well with the posited relationships in GST. Again, strain is also associated with both anxiety and depression in the models that assess both direct and indirect effects lending some more support for the applicability of GST when considering outcomes for PCDR. Also, housing instability is a specific type of strain that seems to offer some credence to the GST framework as it applies to formal recidivism among PCDR. Informal social control's inverse relationship with formal recidivism also adheres to the GST framework while offering a possible intervention point for minimizing new contact with the criminal justice system for PCDR. Admittedly, the informal social control measure is a bit nebulous and this study only provides preliminary support from this somewhat generic measure. However, this does suggest the need for more targeted scrutiny into what forms of informal social control might be most important in the lives of PCDR.

Unfortunately, the indirect relationships suggested by GST were not supported in this study (See Tables 6.4, 6.6 & 6.7). It should be noted that the sample size of 328 may not have produced enough statistical power to detect the small effect sizes that are likely to be produced when using multiple variables in order to test the interactions between

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negative emotions, informal social control, antisocial tendencies, and perceptions of fairness (Holand et al., 2017; Jang & Rhodes, 2012). Jang & Rhodes (2012) found similar results, while also noting the need for more studies testing moderation between the relationship between negative emotions and criminal behavior outcomes in GST by factors such as informal social control, perceptions of fairness, and antisocial tendencies.

Holand et al. (2017) also discuss the need to use smaller coefficient values when assessing whether small, medium, and large effect sizes are present when using interactions moving forward. They and others note that not doing so may compel researchers to view some significant outcomes with small effect sizes as the result of noise in large data sets as opposed to meaningful results (Kenny, 2018). Regardless, the indirect paths from moves to formal recidivism or strain to any recidivist behavior were not found to be significant in the analyses that looked at straightforward mediation or moderated mediation.

Again, the inverse relationship between anxiety and formal recidivism is somewhat unusual but corroborates work from outside GST and previous work using GST that explores the emotions most likely to be associated with arrests, charges and convictions for criminal behavior. However, this does little to change the fact that this current study at best offers mixed evidence regarding the utility of GST in researching recidivism outcomes for PCDR. However, that may be due in part to some of the limitations emanating from the dataset and resulting research design as well.

7.3 Implications

Housing Policy

This study provides some preliminary evidence that may be helpful to understanding recidivism among PCDR and may also be useful to policymakers and practitioners. From a policy perspective there is evidence that restricting housing opportunities through bans on public housing and screening for criminal records in private housing markets may be counterproductive when considering that housing instability is associated with increased recidivism for PCDR. Also, research suggests that overall, people support developing housing options for former offenders. However, the same research notes that this support evaporates when people are asked about housing for PCDR. Also, as the proximity of the hypothetical housing moves closer, support drops as well, particularly when people are asked about the prospect of housing people with criminal records in their own neighborhoods and if the participants identified as white (Garland, et al. 2015; Garland et al., 2014; Garland, et al., 2013).

Researchers also found that those with family members, friends, or even acquaintances who have been incarcerated or who have been involved in the criminal justice system themselves are overwhelmingly in support of housing for people with criminal histories regardless of the offense or the proximity to one's own housing (Garland, et al. 2015; Garland et al., 2014; Garland, et al., 2013). This may indicate that in neighborhoods where criminal justice system involvement is concentrated, PCDR and people with criminal records in general are more likely to be welcomed. These findings are echoed anecdotally by my own experiences participating in focus groups regarding

possible changes to housing policy in Pittsburgh, PA. When asked if they supported an

ordinance that would restrict the use of criminal records by both public housing and

market-based landlords, residents currently living in public housing responded

overwhelmingly in the affirmative. It was almost as if we had asked a ridiculous question

as respondents noted that the people we were talking about were their sons, daughters,

brothers, sisters, husbands, and wives.

Still all of this speaks to the need for practitioners, organizers, and policymakers

to include communities in the process and collaborate in developing ways of humanizing

PCDR when advocating for changes in housing policies. This is true as well when

working with individual clients with criminal histories to find housing. In both cases

humanizing PCDR will likely be especially important when encountering opposition

from those whose lives have not been touched by the criminal justice system in the U.S.

(Garland, et al. 2015; Garland et al., 2014; Garland, et al., 2013).

Housing advocates and policymakers would not be the first to reconsider the

impact of housing restrictions for PCDR and people with criminal records more

generally. During the Obama administration, HUD introduced new policies that restricted

the use any conviction for possession of drugs on a person's record in granting or

rejecting access to public housing due to the well documented racial disparities in arrests

and convictions for drug crimes in the U.S. (Alexander, 2012; Kanovsky, 2016). Cities

like Seattle and Champaign/Urbana have followed suit and passed legislation either

severely restricting the use of criminal records or outlawing their use all together by

private and public landlords (LAC, 2016). As such, there are roadmaps to policy change

and other people who can provide guidance or support on how to best approach these policy changes moving forward.

Other Policy Innovations

Another factor that may encourage change is the range of other policy options available and currently being implemented to help mitigate the collateral consequences of a criminal record. A study by The Collateral Consequences Resource Center (CCRC) noted that 2018 was one of the most productive years in producing what is becoming known as "fair chance" legislation across the U.S. as 32 states, D.C., and the Virgin Islands passed 62 new laws (Love & Schlussel, 2019). The findings from this study offer support for these policies as they are all geared at increasing social and economic opportunity for people with criminal histories in general and frequently specifically for PCDR.

Certificates of relief. One common, although hardly uniformly constructed tool to lessen the impact of criminal records is what are known as certificates of relief/rehabilitation. These are legal documents that state that someone has been rehabilitated and is no longer subject to restrictions on housing, employment, education, etc. In many cases these certificates remove any possible liability that landlords or employers might fear facing when knowingly hiring or renting to someone with a criminal history (Ehman & Reosti, 2015). However, they still do nothing to limit the stigma that comes with a criminal history, which may ultimately be the more difficult hurdle in moving toward less discriminatory treatment of PCDR. Although certificates of

relief are common across the U.S., they are not necessarily uniform from one location to the next and are still only available in less than 20 states (McCann, et al. 2018)

Colorado's new law regarding certificates of relief stands out as a guiding example moving forward. This law enhances preexisting legislation and now allows judges to issue a certificate of relief as early as the time of conviction for almost any offense. These certificates now also remove all collateral sanctions restricting employment, which effectively turns the certificate into a pardon. This is now the farthest-reaching certificate of relief policy in the U.S. and is expected to be especially beneficial to those who might not be otherwise eligible for clearing or expungement of their records (Love & Shlussel, 2019).

Record clearing. 20 states took steps in 2018 to make clearing criminal histories through expungement and sealing easier or available to more people. The most notable change came in Pennsylvania where they have introduced the first automated system to clear eligible records. This is important in that it no longer requires people to go through the cumbersome and often expensive process of researching whether they are eligible then filing court documents to apply for expungement or sealing of their record. These factors have served to limit access to the process in the past to those who could afford it, which has replicated some of the racial and class disparities found elsewhere in the criminal justice system by disproportionately affecting who can and cannot clear their record (Sherry, 2019; Love & Schlussel, 2019; Prescot & Starr, 2019)

Marijuana legalization: The movement to legalize marijuana in the U.S. has also started to put the experiences of PCDR at the forefront of legislative changes as

advocates and policymakers are including provisions that seal or expunge marijuana

offenses from people's records in legalization frameworks (Berman, 2018; Rosen, 2019).

These policies are being promoted and implemented in places that have both already

legalized marijuana and in places that have yet to do so (Berman, 2018; Shover &

Humphreys, 2019). California's legalization framework includes a variety of provisions

to erase marijuana convictions and the city of Denver has even hosted expungement

clinics for people with marijuana records (Sherry, 2019; Berman, 2018). At the same

time, marijuana legalization in the state of New York is currently (spring 2019) on hold

as the caucus of Black lawmakers have refused to pass any legislation that does not

specifically redress the harmful impact of the war on drugs in predominantly Black

communities in the state (Wang & Mays, 2019).

Again, these policies take different forms across the country and in some cases

will likely need to be shaped in ways that are most appropriate for a given state or

community, but the underlying sentiment – that PCDR need not face a lifetime of

hardship due to a criminal conviction – is clear. Furthermore, marijuana possession is and

has been the most common crime people are arrested for in the U.S. each year with over a

million people being arrested in 2017 alone (DWF, 2019). Including expungement and

sealing of marijuana crimes as part of marijuana legalization frameworks moving forward

means that these policies have the potential of impacting the lives millions of PCDR

across the country (Berman, 2018; DWF, 2017).

Although the results from this study do not necessarily address the legalization of

marijuana in a broad sense, they do provide support for the current trend to include

provisions in legalization frameworks that expunge marijuana offenses from criminal

histories (Berman, 2018). The results from this study also suggest that other more broadly

applied fair chance policy options such as certificates of relief/rehabilitation and

expanding mechanisms like expungement and sealing that help clear criminal records

will be beneficial to PCDR.

Informal Social Control & Recidivism

The significant relationship between informal social control and formal

recidivism in this study has implications for policymakers and practitioners as well. This

finding brings into question restrictions not only on housing, but on a range of activities

that might impede one from participation in employment, education, volunteering,

politics, or other activities that connect a person to their community. In this study the

measure of informal social control also included personal relationships both extended and

romantic. This provides some evidence that personal connections and a more general

connection to one's community or society overall play a role in reducing formal criminal

recidivism for PCDR.

These findings may be particularly salient for PCDR as much of their contact with

the criminal justice system stems from their drug use and the fact that their drug use in

and of itself constitutes criminal behavior. As previously mentioned, there is a growing

body of literature connecting both social and personal isolation to increased levels of

substance use and other compulsive behaviors like gambling and work. All of which are

detrimental when done to excess or used to replace a lack of personal connection or

integration into a community (Hari, 2015; Szalavitz, 2016). On the other hand, there is

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evidence that even joining community organizations based on a shared identity of drug use can help reduce risky drug using behaviors and provide opportunities to build social networks that extend beyond only those who use drugs (Kerr, et al., 2006)

What may be more telling is what some poverty researchers have deemed social exclusion, which suggests that those in power purposely limit the ability of some groups to fully participate both socially and economically in society (Davis & Sanchez-Martinez, 2015). Often these groups are those that are considered unworthy of full participation in society due to some characteristic, such as race, or because of certain behaviors or markers, such as drug use or a criminal record. Although one may be hard pressed to find a politician that would freely admit that they support policies that purposely exclude people from social and economic opportunities, research suggests that this may be part of the underlying motivation for many collateral sanctions policies (Plassmeyer & Sliva, 2017). This has been seen to be the case particularly for those policies limiting access to economic participation and social opportunity through restrictions on housing, employment and education, while also limiting civil opportunities through restrictions on voting and holding office (LAC, 2009, Whittle, 2016).

In places with limited resources to provide for a multitude of people in need, policies that divide those in need into criminal and non-criminal may set up a hierarchy of who is most deserving of those scarce resources. The findings in this study offer some supportive evidence for the notion that policies that limit one's ability to connect to society are likely to be ineffective at reducing recidivism, especially among PCDR. At the same time, if the intent of policy is to exclude a specific group of people from full

participation in society by creating a tiered system of access to scarce resources like affordable housing, as social exclusion theory suggests, then they may be considered much more successful.

Ultimately the combination of findings that a) housing instability is associated with increased recidivism and b) informal social control is related with decreases in recidivism warrant a deeper analysis of the motivation behind policies that make affordable housing and full participation in society unpalatable for PCDR. In the same vein, it is also important to look at outcomes for PCDR in localities that have made accessing both housing and other social and economic opportunities for PCDR less difficult.

Implications for Future Research

Although GST has limitations as an appropriate framework in assessing outcomes for PCDR (see *6.6 Limitations*) the framework should not be completely abandoned in future endeavors to better understand this population. Future studies incorporating GST in research regarding PCDR could be improved by collecting data that specifically target the constructs that GST posits should be associated with, or even predictive of, criminal, anti-social, or self-destructive behavior among PCDR. But if data sets are available that already have variables that are more consistent with GST constructs, using them would help limit unnecessary costs and exposure for an already vulnerable population. Furthermore, data sets like the National Longitudinal Survey of Youth 1997 may provide sample sizes with the requisite power to detect the small effect sizes that would be expected when incorporating interactions between up to four different variables at a time.

Larger data sets or data sets that might produce a wider range of people would help address some of the generalizability issues that will be discussed in the next section as well. Although it is important to understand the experiences of fathers living in large cities, as these have been the areas that have historically borne the brunt of the war on drugs, other data sets might offer the chance to cast a wider net or even focus in on other specific populations. These might include women living with criminal drug records, people without children, the differences in experiences between PCDR in rural and urban areas, and, although Black Americans are notoriously disproportionately negatively impacted by the criminal justice system, a more diverse racial sample to see if the relationships in this study hold when larger percentages of other racial groups are included. Results using these other sources of data may show the results in this study to be an aberration or could highlight more universal trends experienced by PCDR in general.

Future research should also explore the impact of policy on PCDR. Although this study provides some evidence that policies that limit access to housing, along with social and economic opportunity, may be counterproductive in the case of recidivism for PCDR, it does not explicitly connect housing instability or informal social control to policy. At no point is a direct relationship between existing policies and either of these variables explored. However, that was not the intent of this research as the data was deidentified to the point where it is impossible to know where participants lived at the time of their first reported drug offense and therefore difficult to know exactly what kind of restrictions toward housing, employment, education, and civic engagement they may have faced.

Researchers can also apply for access to the restricted FF data which includes variables for participants' locations that would allow researchers to look at outcomes in areas that might have different policies (more or less restrictive access to criminal records, etc.) regarding housing and other important social, civic, and economic opportunities. Also, this would open the opportunity to explore whether different policies in different locales are associated with housing instability or informal social control. Ultimately, these inquiries could provide a deeper understanding of how to best approach building informal social control and decreasing housing instability issues for PCDR from both policy and individual intervention perspectives.

Another important line of research that this project spurs is understanding what types of informal social control are most associated with decreased recidivism among PCDR. Furthermore, are there types of informal social control that might be able to reduce strain and improve housing stability in the long run. A deeper, more complex understanding of how specific types of informal social control impact recidivism among PCDR would make a useful contribution to the literature both on the importance of informal social control in the lives of PCDR and informal social control more generally.

The last factor for future researchers to consider is using alternate theoretical frameworks to explore the experiences of PCDR. If it turns out that GST is not the most appropriate framework, especially when attempting to model its more complex relationships, using other frameworks or a combination might be a more realistic way to develop hypotheses and construct variables moving forward and has even been suggested by GST's founder (Agnew, 2006; Jang & Rhodes, 2012). This may be particularly salient

when looking into the adoption of restrictive policies for PCDR or when evaluating changes in those policies over time. The social exclusion framework was previously mentioned and offers a more critical lens to evaluate policies impacting PCDR which might ultimately be more in line with social work values such as promoting equity and social justice for all people.

7.4 Significance for Social Work

This study provides some evidence that many existing collateral sanctions policies limiting housing, along with other social and economic opportunities, may contribute to high rates of recidivism found in the U.S., especially among PCDR. At the same time, it seems that there is a growing consensus among advocates, policymakers, and the public that criminal justice system reform is necessary, particularly in when it comes to people who use drugs and PCDR. This is evidenced by bi-partisan support for "fair chance" legislation across country, along with the trend of including expungement or sealing of records for the millions of PCDR in existing and emerging marijuana legalization frameworks. As political traction builds for policies that reduce, rather than increase, systematic barriers to full participation in society for PCDR, social work has an opportunity to play a meaningful role in shaping these policies moving forward.

This is important to consider given that the financial costs associated with current expungement processes around the country often replicate the same racial and class disparities already so prevalent in the criminal justice system. Here again there is evidence that only those who already have access to resources are likely to clear their records (Sherry, 2019; Love & Schlussel, 2019, Prescott & Starr, 2019). As such, social

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workers need to work to make sure that well intended, and vague, talk about expungements and sealing of records moving forward involves clearly defined mechanisms, such as automatic expungement, that make the process equitable for all people whether it is tied to marijuana legalization or other policy proposals.

Similarly, social workers need not be satisfied with the passage of policies that restrict or eliminate the use of criminal records in housing decisions if those policies are not accompanied by others that address the general lack of affordable housing currently plaguing the U.S. (Henderson, 2019). Policies that expand the number of people eligible to participate in already saturated housing markets may produce the unintended consequence of pushing housing costs even higher, which could serve as a de facto mechanism for denying housing to low-income people – a group that disproportionately includes people of color and people with criminal histories (Alexander, 2012; Desmond, 2016). Ultimately, social workers would do well to advocate for both access to *and* the development of additional affordable housing options for low-income people if they aim to promote equity in access to housing for PCDR and people in general.

Social workers can also work to eliminate the use of privately-run companies who profit by making people's criminal histories readily available online. These companies are under no legal obligation to make sure that the information they provide is up to date or accurate. As such, they often show offenses that were supposed to be expunged, sealed, or that were only intended to stay on one's record for a brief period. This can, and does, result in people experiencing negative consequences for failing to disclose a record they had assumed was clean (Jacobs & Crepet, 2008; Radice, 2012).

Social workers should advocate for equity in expungement processes, limiting the use of criminal records, limiting access to criminal records, ensuring accuracy of criminal records, and the development of affordable housing options nationwide. All these policy options can help redress the harms done to communities of color and low-income people over the last four decades of the war on drugs. However, without explicit attention to mechanisms that make these policies work for marginalized communities, social workers need to be cognizant that even the best intended reforms can end up exacerbating the racial and class inequities they aim to address.

7.5 Limitations

Like most, if not all research, this study has its limitations. These limitations do not undermine the findings or implications presented so far but do show that further research is necessary in order to gain a better understanding of recidivism and other outcomes for PCDR. This section discusses the issues that arose in using the publicly available Fragile Families (FF) data set to develop variables consistent with a GST framework. It also speaks to how those issues impacted the study's internal consistency and the resulting limitations to generalizations and causal claims regarding the relationships found in the study.

Uniformity of Variables Across Waves for GST Variables.

There were multiple issues that arose in selecting the variables for this study. At first it appeared that variables representing the constructs from GST were readily available across the waves of data. However, due to the availability of variables across waves, skip patterns in data collection, and a lack of uniformity in response categories

across waves for some variables, some data were only usable from a single wave of the FF study. In these cases, they are considered a static variable as opposed to a representation of how participants answered at a given moment in time.

For example, there were variables in multiple waves of the FF data set that asked the same question that was ultimately used to measure perceptions of fairness. However, the item available in the first wave of questions had a dichotomous outcome and the one available in wave five had an ordinal scale for an outcome. This variable was doubly problematic as far as temporal order is concerned in that neither option was available in any of the waves in which participants could report their first drug charge or conviction. However, incorporating a measure of perceptions of fairness was considered important as much of the literature on GST fails to do so. Unfortunately, using variables that were not available at the wave of the 1st reported drug offense limits temporal sequencing in this study and the interpretation of the findings in regard to any causal claims.

Another example of a variable that was drawn from a specific wave due to availability and measurement consistency was the measure for anti-social tendencies. The questions that make up this variable were only available in wave four of the data collection, but again the variable was needed in order to represent the full range of constructs from GST in the study.

It is possible that if these variables (perceptions of fairness and antisocial tendencies) were available from the same wave as the first reported drug offense, they may have represented a more accurate state of both antisocial tendencies and perceptions of fairness among participants and may have produced different results. The use of static

versus state variables for negative emotions in GST research has been recognized as a

pitfall of doing GST research with secondary data and future secondary data research that

incorporates GST might be better served by data sets that have uniform measures able to

represent all the constructs from GST across waves of data collection (Jang & Rhodes,

2012).

Skip Patterns & Recidivism

The study likely doesn't capture the full range of recidivism experienced by

PCDR. Here there is an issue with skip patterns where people were not asked criminal

justice system involvement questions in wave four if they had answered them in wave

three. This allows for the possibility that PCDR whose first wave of offense was either

two or three may have had an instance of formal recidivism in wave four that went

unrecorded. Furthermore, although questions regarding criminal justice system

involvement were asked of all participants in wave five it is still possible that a

participant had a new conviction or charge in wave four that was not subsequently

reported in wave five. It is unclear if this would have an impact on the current results but

should certainly be considered when drawing conclusions from this study.

Inclusion Criteria, Recidivism, & Drug Records

The inclusion criteria of the first instance in which FF participants report a drug

conviction or charge cannot definitively indicate that participants in this study had a

criminal drug record or that it was the source of any housing instability they experienced

during the study. As the policy section notes, there is little uniformity in whether it takes

a conviction for a drug offense to trigger collateral sanctions like housing restrictions

across the country (LAC, 2009). However, the ubiquity of and easy access to unregulated arrest and conviction records online indicates that anyone with formal contact with the criminal justice system's criminal history will be readily accessible to public and private landlords (Jacobs & Crepet, 2008; Radice, 2012). Also, although it is not known whether participants are experiencing housing instability directly due to a criminal drug record, it is known whether they are experiencing housing instability overall. Regardless, it is still worth considering that other data sets may be able to better connect the experience of hardships such as housing instability to criminal records when conducting further research.

In some cases, it is difficult to know if the first reported drug offense is itself an indication of recidivism from a previous drug offense. It is possible that some participants may have had a criminal drug record prior to the start of the FF study. However, participants were asked about the existence of a previous conviction (although not the specific charge) and whether they had ever been incarcerated. The FF data also includes an item for time incarcerated, however the responses to this item for this study's sample were overwhelmingly missing making ever incarcerated a preferable choice to represent previous incarceration. These other variables were incorporated to help control for the possibility that the first reported drug offenses are themselves representative of recidivism in general. Still, only those reporting drug offenses after the FF study started collecting criminal justice information can be considered as having a criminal drug record in the current study. Given that nearly 90% the PCDR in this sample had a previous conviction and that over 70% had been incarcerated it is important that generalizations be

limited to PCDR with evidence of previous criminal histories. Also, this may indicate that data sets with access to the categories of participants' earliest offenses would give a more complete view of recidivism for PCDR.

Generalizability

Obviously, the decision not to include women in the study limits the generalizability of the findings in this study. However, given that the FF data is made up entirely of parents, all the participants in this study are fathers. There is growing interest among researchers in the role that fathers play in the lives of vulnerable youth, and youth whose parents are involved in the criminal justice system are certainly a vulnerable population. Considering these factors and those mentioned throughout this section, generalizability for the results of this study are limited to fathers with criminal drug records living in the 20 U.S. cities with populations over 200,000 included in the FF data who fathered a child at some point between 1998-2000. Still, when applying the weights, the sample of 328 fathers represents the experiences of over 18,000 fathers nationwide living in 20 large U.S. cities.

7.6 Summary

It has been nearly 50 years since Richard Nixon started the War on Drugs in 1971. From 1980 to 2012, incarceration rates have increased by over 222% in the U.S. (The Hamilton Project, 2014). Furthermore, by 2015 over 70 million people in the U.S. had a criminal history (Friedman, 2015) and over 32.5 million people have been arrested for a drug offense since 1996 (DWF, 2019). These numbers indicate it should come as no surprise that most Americans' lives have been impacted, either directly or indirectly, by

the criminal justice system (Friedman, 2015). As is well documented in this dissertation, the people who face criminal justice system involvement due to drug use and the drug trade do not disappear once incarcerated. Over 95% of people who are convicted and serve time in prison eventually return to society with a criminal record and face a multitude of legal restrictions, known as collateral sanctions, on their ability to obtain housing, employment, and education or to participate fully in civil society through voting or holding office (Pettus-Davis, 2014; Whittle, 2016).

In recent years, concerns about the impact of collateral sanctions on the ability of PCDR to successfully reintegrate into society have become more commonplace. Michelle Alexander's (2012) the New Jim Crow and Devah Pager's (2003) work on job opportunities for PCDR have helped illuminate the social and economic difficulties experienced by PCDR, especially among people of color and the poor. Also, the legalization of marijuana in multiple states (and countries) in the past seven years has brought conversations of what the possibilities of drug policy and criminal justice policy reform are, and should be, into mainstream debate and conversations.

As awareness of these issues has grown, even candidates for the president of the United States of America are proposing polices that aim to reduce the impact that the war on drugs and criminal justice system involvement has had on PCDR and their ability to fully reintegrate into society. The results from this study provide an extension of previous findings that lend credibility to the policy positions these leaders are adopting concerning housing and work opportunities for PCDR moving forward. And although this study does not specifically provide any evidence regarding the utility of legalizing marijuana, it does

offer some support that sealing marijuana records as part of legalization frameworks will likely be beneficial for both individual PCDR and their communities.

Ultimately, this study presents the results of a series of quantitative analyses designed to gain a better understanding of how housing instability is related to recidivism among PCDR while also testing the utility of General Strain Theory as an appropriate theoretical framework for better understanding this population. Results suggest that housing instability is associated with increased formal recidivism, informal social control is associated with decreases in formal recidivism, and that strain, or stress, is associated with self-reported criminal behavior in general. Taken together, these results provide some evidence supporting GST as a useful theory in understanding criminal behavior among PCDR though some additional refinement or theory development may be needed.

The results offer some direction in understanding the experiences of PCDR and what types of policies may be most effective in helping them reintegrate and fully participate in society. What is abundantly clear is that policies that serve to isolate PCDR by limiting their access to housing and other social and economic opportunities are likely to be counterproductive and may ultimately serve to increase recidivism rates and other undesirable outcomes. In contrast, the results also support recent policy trends, and specific initiatives, that aim to reduce the barriers PCDR face to full participation in society. However, due to the racial disparities embedded in the criminal justice system, suggestions are also presented on how advocates, including social workers, can stay vigilant in demanding equity when advancing or advocating for policies that impact PCDR moving forward. Lastly, the results offer guidance for future research

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investigating which specific social and economic factors might be most relevant for improving outcomes for PCDR in the future.

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Appendix A: Literature Review Tables

The Relationship Between Criminal Behavior & Housing

Authors	Methods	Population	Sample Size	Sample Type	Outcomes	Theory
Baldry, E.; McDonnell, D.; & Maplestone, P. (2003)	Longitudinal, Regression analysis	Formerly incarcerated people (FIP)	194	Purposive, Primary Data	Supported housing is significantly associated with decreased drug use, recidivism, and increased social integration	Social integration
Bruce, M.; Crowley, S.; Jeffcote, N.; & Coulston, B. (2014)	Cross sectional, Hierarchical regression analysis	FIP/Men diagnosed with severe personality disorders	107	Naturalistic, Primary Data	Receiving supported housing significantly associated with men being 4 times less likely to reoffend	None
Clifasefi, S. L.; Malone, D. K.; & Collins, S. E. (2013)	Cross sectional, Regression analysis	Chronically homeless people	95	Purposive, Secondary Data	The amount of time spent in project-based housing first is significantly associated with decreased jail time for up to two years following initial housing first exposure	None
Ellison, M.; Fox, C.; Gains, A.: & Pollock, G. (2013)	Longitudinal, Survival Analysis	FIP	400	Purposive, Primary Data	Receiving supportive housing significantly reduced reoffending by 9.1%.	None
Hamilton, Z.; Kigerl, A.; & Hays, Z. (2015)	Longitudinal, Quasi Experimental (Propensity Score Matching), T-Tests Analysis	FIP	3237	Purposive, Secondary Data	Housing voucher recipients are marginally significantly (p = .07) less likely to be reincarcerated. Housing cost vouchers have a cost benefit ratio of 1:7.06 compared to early release and recidivism.	None
Kushel, M. B.; Hahn, J. A.; Evans, J. L. Bangsberg, D. R.; & Moss, A. R. (2005)	Cross Sectional, Logistic Regression Analysis	FIP/Marginally housed and homeless	1426	Quota, Primary Data	Despite high levels of health risks among all homeless and marginally housed people, the levels among homeless former prisoners were even higher. Current heroin use, current methamphetamine use, mental illness, HIV, current cocaine use, and currently selling drugs were all significantly associated with a history of imprisonment	None
Manzoni, P.; Brochu, S.: Fischer, B.; & Rehm, J. (2006)	Cross Sectional, Logistic Regression Analysis	Active drug users not involved in the criminal justice system	677	Snowball, Primary Data	The frequency of heroin, cocaine, and crack use, gender, housing status, and past criminal justice involvement are significant predictors of property crime. Furthermore, crack use had a significantly different impact on property crime depending on housing status and city.	None

Metraux, S. & Culhane, D. P. (2004)	Longitudinal, Survival Analysis	FIP/People released from New York State prisons to New York City in 1995 – 1998	48,242	Purposive, Secondary Data	Time since prison release and history of residential instability were the most salient risk factors significantly related to shelter use, and shelter use significantly increased the risk of subsequent reincarceration	None
Parhar, K. & Wormith, J. S. (2013)	Longitudinal, ANOVA Analysis	Canadian prisoners	41	Purposive, Primary and Secondary Data	Homelessness prior to incarceration was significantly related to increased violent institutional behavior, violence risk level, and criminogenic needs but not recidivism. Stable housing prior to incarceration was significantly related to greater community support.	None
Somers, J. M.; Rezansoff, S. N.; Moniruzzaman, A.; Palepu, A.; & Patterson, M. (2013)	Longitudinal, Random Controlled Trial, Regression Analysis	Homeless persons in Vancouver, Canada	198	Random, Primary Data	The scattered site housing first condition was associated with significantly lower numbers of sentences than treatment as usual. Congregate housing first was associated with a marginally significant reduction in sentences compared to treatment as usual.	None
Lutze, F. E.; Rosky, J. W.; & Hamilton, Z. K. (2014)	Longitudinal, Quasi Experimental (Propensity score matching), Cox Regression Analysis	FIP	416	Purposive, Secondary Data	The RHPP program was successful in significantly reducing new convictions and readmission to prison for new crimes, but had no significant effect on revocations. In addition, results showed that periods of homelessness significantly elevated the risk of recidivism for new convictions, revocations, and readmission to prison.	None
O'Leary, C. (2013)	Systematic Review	Articles regarding housing stability and recidivism	40	Secondary Data	Housing stability has a potential role in programs aimed at reducing recidivism. The nature of that role, the causal mechanisms underlying that role and the methods used to increase stability of housing are not clear from the literature	None
Wright, B. J.; Zhang, S. X.; Farabee, D.; & Braatz, R. (2014)	Narrative Analysis	Evaluations of community-based prisoner reentry programs (29 programs)	35 (29 programs)	Secondary Data	Programs with aftercare and housing assistance were most likely to produce favorable outcomes. Most studies used quasi-experimental designs; few employed random assignments. Most of the studies reported favorable outcomes. Quasi-experimental studies were also far more likely to find positive outcomes than studies using random assignment.	None

Walker, A.; Hempel, L.; Unnithan, N.; Prabha, P.; & Mark, R. (2014)	Cross Sectional, Thematic Analysis	FIP	73	Purposive, Primary Data	Having access to housing facilitates successful reentry by enabling the acquisition, accumulation, and deployment of social capital among ex-offenders. Social capital allows parolees to navigate social interactions and access jobs, transportation, and finances.	Social Capital
Garland, B.; Wodahl, E. J.; B& Mayfield, J. (2011)	Longitudinal, Thematic Analysis	FIP/Males	43	Purposive, Primary Data	Housing was cited as an issue, particularly in the first few days after release. Other issues with housing included the conditions, type (shelters; religiosity), imposing on others, and a lack of independence.	None
*De Saxe Zerden, L.; *Lundgren, L. M.; *Chassler, D.; Horowitz, A. C.; Adorno, E.; & Purington, T. (2013)	Cross Sectional, Regression Analysis	Puerto Rican drug users with a history of incarceration	280	Purposive, Primary Data	Respondents who live in their own home, receive public assistance, and have recent familial contact are significantly less likely to have been incarcerated in the past 6 months. Among study participants, men and those who initiated heroin use at younger ages are more likely to have greater lifetime incarceration totals.	None
*Fedock, G.; *Fries, L.; & *Kubiak, S. P. (2013)	Cross Sectional, ANOVA, T-Test, Chi^2 analysis	Prisoners	725	Purposive, Primary Data	Women in the sample presented with higher rates of homelessness prior to incarceration, anticipated post incarceration homelessness, serious mental illness, substance use disorder, and trauma histories than men, as well as higher rates of multiple and co-occurring risk factors.	None
Geller, A. & Curtis, M. A. (2011)	Longitudinal, Logistic Regression	FIP/Males	3000	Random, Secondary Data	We find that men recently incarcerated face greater housing insecurity, including both serious hardships such as homelessness, and precursors to homelessness such as residential turnover and relying on others for housing expenses than those never incarcerated. Their increased risk is tied both to diminished annual earnings and other factors, including, potentially, evictions from public housing supported by Federal "one-strike" policies.	None
*Morani, N. M.; *Wikoff, N.; *Linhorst, D. M.; & Bratton, S. (2011)	Longitudinal, T-Tests	FIP	184	Natural, Primary Data	The study found that many ex-offenders will seek assistance through reentry programs, even when participation is voluntary, and that they can self-identify their service needs. Sex and drug offenders face particularly steep challenges in securing housing due to restrictions	Social Capitol

Note: * = Social work researcher

The Relationship Between Housing & Drug Use

Authors	Methods	Population	Sample Size	Sample Type	Outcomes	Theory
Briggs, D.; Rhodes, T. I. M.; Marks, D.; Kimber, J. O.; Holloway, G.; & Jones, S. (2009)	Cross Sectional, Thematic Analysis	Injection Drug Users (IDU)	45	Convenience, Primary Data	Temporary accommodation and hostels for the homeless may provide a 'safe haven' from street-based drug use and public injecting environments and are characterized as a retreat from the 'chaos' of the street. But hostels may also constitute 'risk environments', facilitating drug using and risk networks and transitions to new patterns of use, including increased frequency of injecting. For some, homelessness was positioned as 'safer' than temporary housing with regards to managing drug use. Stable housing emerges as a key structural factor in creating enabling environments for health.	None
Clare, P. (2006)	Cross Sectional, Semi Structured interviews	Problematic Drug Users	40	Convenience, Primary Data	Housing is a commodity in demand amongst a group of people for whom accommodation may be problematic, insecure or non-existent. Consequently, it has an exchange value and can be bartered for other commodities or services—drugs, sex, money or goods.	Cross-price elasticity
Collins, S. E.; Clifasefi, S. L.; Dana, E. A.; Andrasik, M. P.; Stahl, N.; Kirouac, M.; Welbaum, C.; King, M.; Malone, D. K. (2012)	Cross Sectional, Grounded Theory	Staff and residents of a project-based housing first program	75	Purposive, Primary Data	It is important to consider residents' motivations for alcohol use, which may include perceived positive and negative consequences. A harm reduction approach was reported to facilitate housing attainment and maintenance. Residents and staff reported that traditional, abstinence-based approaches are neither desirable nor effective for this specific population.	None
Gray, P. & Fraser, P. (2005)	Cross Sectional, Thematic Analysis	Heroin users	12	Convenience, Primary Data	Homelessness and housing instability tend to induce more drug use and more difficulty in getting/staying clean. This is true for living with others as well. Independent options are sought by heroin users.	None
Rowe, J. (2005)	Cross Sectional, Grounded Theory	Homeless IDU	16	Purposive, Primary Data	Housing is sought and viewed as helpful in reducing risky drug behaviors. Drug rehab is sought by homeless drug users.	None

Gibson, E. K.; Exner, H.; Stone, R.; Lindquist, J.; Cowen, L. Roth, E. A. (2011)	Cross Sectional, Logistic Regression,	IDU enrolled in a needle exchange program	105	Convenience, Primary Data	Analyses confirmed the importance of housing status as a determinant of injection practices and highlights the benefits of including IDUs in data interpretation. IDU questioned the legitimacy of the original housing measure as it did not consider that shelters did not allows rigs, meaning that one would still have to use public places to shoot up.	None
Coady, M. H.; Latka, M. H.; Thiede, H.; Golub, E. T.; Ouellet, L.; Hudson, S. M.; Kapadia, F.; & Garfein, R. S. (2007)	Cross Sectional, Regression Analysis	IDU enrolled in an HIV prevention trial	3266	Purposive, Primary Data	Significant antecedents of homelessness are living in out-of-home placements, thrown out of home, juvenile detention, and childhood abuse. Significant correlates of homelessness are income from illegal sources, daily meth or alcohol use, using shooting galleries, and sex work. HIV risk is significantly more likely among homeless IDU	None
Elifson, K. W. Sterk, C. E. Theall, K. P. (2007)	Longitudinal, Random Control Trial ANOVA, MANOVA, Regression	Black female drug users	336	Random, Primary Data	At baseline, women with unstable housing conditions reported higher levels of HIV drug and sex-related HIV risk behavior. In addition, their levels of behavioral change over time were significantly lower. The findings also show the importance of expanding the stable housing condition into two categories thereby distinguishing between a woman's own and someone else's place.	None
German, D.; Davey, M. A.; Latkin, C. A. (2007)	Cross Sectional, Regression Analysis	IDU	807	Convenience, Primary Data	Transient individuals were significantly more likely to share needles and go to a shooting gallery than non-transient individuals. Transience was not associated with exchanging sex or having multiple sex partners when homelessness was included in the models.	None
*Collard, C. S; *Lewinson, T.; & *Watkins, K. (2014)	Cross Sectional, ANOVA	Homeless persons with chronic SUD, MH or health issues	103	Purposive, Primary Data	There were statistically significant differences for supportive housing sites when contrasted with the non-supportive housing group. The findings from that analysis showed statistical significance of a positive association between sobriety and supportive house tenure.	Ecological Systems

*Kemp, P. A. Neale, J.; & Robertson, M. (2006)	Longitudinal, Regression Analysis	Drug users entering rehab	877	Convenience, Primary Data	Thirty-six per cent of problem drug users entering treatment were homeless at either or both interviews, a prevalence rate that is at least seven times greater than among the general population. Movements into homelessness among problem drug users were significantly associated with recently losing residency of children, other recent family problems and worsening general health. Movements out of homelessness were significantly associated with not having recent family problems.	None
*Severson, M. *E.; Veeh, C.; *Bruns, K.; & *Lee, J.(2012)	Cross Sectional, T-tests, chi^2	Reentry participants released into the community for at least 12 months	357	Purposive, Primary Data	There is a significant decline in the magnitude of difference between those completing the program and those not between 6- and 24-months post release. This decline in effect size suggests a finding identified by other researchers: that over time, the rehabilitative or positive impact of most correctional programming loses its effect. That said, viewing the benefits of program completion only through the prism of reductions in long-term recidivism may overlook many other positive outcomes such as gains in education or health status.	None
Bowman, S. W. & *Travis Jr, R. (2012)	Cross Sectional	FIP and reentry service providers	128	Purposive, Primary Data	System is deliberate and run for profit; put back into disadvantaged communities without resources surrounded by old trappings; access to employment limited; waitlists and ensuing homelessness; ultimately the attitude and the words chose by the parole officers seemed to have a major impact on successful reentry.	Theory of Verbal Behavior

Note: * = Social work researcher

Attitudes Towards Housing Former Offenders

Authors	Methods	Population	Sample Size	Sample Type	Outcomes	Theory
Garland, B.; Wodahl, E.; & Saxon, C. (2014)	Cross Sectional, Regression Analysis	Residents of a Midwestern state	386	Random, Primary Data	The most consistent significant influence on acceptance of transitional housing centers was general support for helping offenders during reentry. Other variables with more limited effects were an emphasis on services and programming over monitoring and surveillance during reentry, having a close family member imprisoned, age, and education level.	Not in my backyard
Garland, B.: Wodahl, E.; & Schuhmann, R. (2013)	Cross Sectional, Descriptive	Residents of a Midwestern state	386	Random, Primary Data	Fewer than 60% agree that helping ex-prisoners with housing after their release should be a high priority on the state's agenda. Only about 1 out of 4 people agree that offenders who have been in prison multiple times are just as deserving of receiving housing assistance as those who are coming out for the first time. Housing for violent and drug offenders generates serious resistance. Only half of Missouri residents approve of the concept of a transitional housing unit in their city, 25% one in their neighborhood.	Value Conflict
Garland, B.; Wodahl, E.; & Smith, R. G. (2015)	Cross Sectional, Regression OLS	Residents of a Midwestern state	386	Random, Primary Data	Respondents who felt greater religious forgiveness and had less belief in a punitive God showed significantly more support for transitional programming and transitional housing. Those with more education were statistically more likely to support transitional housing. Conservatives were statistically less likely to support transitional housing as were those who identified as white.	Religiosity

Appendix B: Research Questions & Support for Hypotheses

Research Questions/Hypotheses	Supported (Yes/No/Partially)
1. Is housing instability or strain among PCDR associated with recidivist criminal behavior?	
a. Housing instability will be associated with increases in recidivist criminal behavior.	Yes
b. Strain will be associated with increases in recidivist criminal behavior.	Partially
2. Is the relationship between housing instability and recidivist criminal behavior mediated by negative emotions, informal social control, antisocial tendencies, and perceptions of fairness?	
a. Housing instability will be associated with an increase of negative emotions, antisocial tendencies, and perceptions of unfairness.	No
b. Housing instability will be associated with decrease of informal social control.	No
c. Negative emotions, antisocial tendencies, and perceptions of unfairness will be associated with an increase in reported recidivist criminal behavior.	No
d. Informal social control will be associated with a decrease of recidivist criminal behavior.	Yes
e. The relationship between housing instability and recidivist criminal behavior will be at least partially mediated by negative emotions, informal social control, antisocial tendencies, or perceptions of fairness.	No
3. Is the relationship between strain and recidivist criminal behavior mediated by negative emotions, informal social control, antisocial tendencies, and perceptions of fairness?	
a. Strain will be associated with an increase in negative emotions, antisocial tendencies, and perceptions of unfairness.	Partially
b. Strain will be associated with a decrease of informal social control.	No
c. The relationship between strain and reported recidivist criminal behavior will be at least partially mediated by negative emotions, informal social control, antisocial tendencies, or perceptions of fairness.	No
4. Is the relationship between negative emotions and recidivist criminal behavior dependent on levels of informal social control, antisocial tendencies, and perceptions of fairness when accounting for the effects of housing instability and strain?	

a. The relationship between negative emotions and reported recidivist criminal behavior will be strongest when levels of informal social control are low, while levels of both antisocial tendencies and perceptions of unfairness are high.	No
b. The relationship between negative emotions and reported recidivist criminal behavior will be weakest when levels of informal social control are high, while levels of both antisocial tendencies and perceptions of unfairness are low.	No