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INTRODUCTION TO THE ISSUE ON RURAL TREATMENT COURT PROGRAMS

John M. Eassey[1]

This issue of *Drug Court Review* presents a collection of articles centered on problem-solving courts in rural areas. As has been noted elsewhere (Donnermeyer & DeKeseredy, 2014), an overwhelming proportion of criminal justice research has been conducted in urban and suburban areas. Consequent to this "urban bias," there has been a paucity of research set in rural areas in general and even less so on rural problem-solving courts in particular. While this limitation is slowly being rectified, it has posed a number of challenges for practitioners and academics and likely impeded the expansion of best practices into rural areas. However, urban bias has been more than just coincidence. Interestingly, its origins can be traced back to the development of modern criminology in the United States, while its persistence stems from a false dichotomy of rural-urban divide and stereotype. Before introducing the manuscripts in this issue, I will consider the reasons for the poverty of rural research in hopes that we may avoid similar pitfalls in the future.

Anyone who has taken an introductory course in criminological theory likely learned that the roots of modern American criminology can generally be traced back to the famed Chicago School—that is, the sociology department of the University of Chicago, referred to as such due to the unique and paradigm-shifting work they were doing. While it is difficult to detail the notable contributions made by this collection of scholars during the early 20th century, the most important were, arguably, related to the theoretical causes of crime.

For context, early criminological paradigms favored by many of the early theorists (e.g., Hooten, Lombroso) located the source of criminality to deficiencies in individual constitution, character, or cognition (Sutherland, 1940). In other words, lawbreaking was part of an inherent nature for certain individuals. By contrast, the Chicago School largely rejected this premise and persuasively asserted the role of one's social and structural environment in criminality. Their work led to the emergence of urban sociology.[2]

Most relevant, Robert Park and Ernest Burgess famously developed models of human ecology that relate the layout, natural boundaries, and other physical features of a city to various types of social behavior and patterns of movement occurring therein. The human ecology approach would subsequently be applied to the study of delinquency by Clifford Shaw, who, along with Henry McKay, would go on to use the insights gained from this approach to develop the theory of social disorganization. Social disorganization links social structural conditions (e.g., poverty, population heterogeneity, residential mobility) to mechanisms of social control within a geographic area, such as a

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[2] It should be noted that ideas of environmental and ecological influence were not necessarily new. Indeed, their intellectual heritage can be traced back to European scholars, including Guerry, Quetelet, and Mayhew, who focused on social conditions and the geographic distribution of certain phenomena. However, the Chicago School was responsible for bringing these ideas to the forefront of American sociology.

neighborhood. As such, crime, poverty, unemployment, homelessness, and other social problems are symptoms of an area unable to establish social control due to its disorganized state, not the individual pathology of its residents.

Clearly, the foundational ideas of the Chicago School have had a profound and largely positive impact on the direction of criminology over the course of the 20th century. At the same time, their contributed to an enduring preoccupation with urban and suburban areas is likely equally clear. To be fair, it is understandable that scholars would focus on the area around them, especially when that area is the city of Chicago. Chicago, like many areas, was undergoing rapid change in the late 19th and early 20th centuries. Industrialization combined with an influx of European immigrants saw urban, and subsequently suburban, populations explode, which contributed to a number of social problems. Therefore, it was only natural for urbanization to be reflected in the etiology of modern criminological thought.

While social disorganization and place-based criminology have, with a few notable exceptions (Sampson & Groves, 1989), remained prominent throughout the 20th century, it did not prevent other paradigms and research agendas from developing (e.g., labeling and other critical perspectives). This raises a question: Why has rural criminology remained underdeveloped to such a degree?

Part of the answer lies in the nature of urbanization and the power of stereotype. For example, strong stereotypes that painted cities and urban areas as "sinful" or amoral were persistent (Laub, 1983), especially during a time when large portions of population resided outside of such areas. Fear of strangers and "the other" no doubt played a role as critics bemoaned the loss of community (Sampson, 2012) and by extension systemic social organization (Bursik & Grasmick, 1993). There were even groups of reformists actively working to undo or neutralize the deleterious effects wrought by urbanization (Finestone, 1976). In short, urban areas became synonymous with all types of social ills, including crime, so the logical assumption was that studying urban areas was required when studying crime.

With these and similar stereotypes in mind, it is even possible to twist the logic of social disorganization theory to support these conclusions. Rural areas have relatively little crime because they do not visibly appear inflicted with the markers of disorganization. As has been noted elsewhere (Osgood & Chamber, 2000), this is confirmation bias; there is little reason to believe that disorganization is an inherently urban phenomenon.

To this point, rural areas differ substantially from one another just as cities do, including with respect to their ability to establish shared values and solve problems (Osgood & Chamber, 2000). Further, rates of certain crimes in rural areas, such as domestic violence, also compare to or exceed that of urban areas. Additionally, social ties and close-knit networks just as easily reinforce and foster the transmission negative cultural values (e.g., views towards women) as they can shared desires for the maintenance of order.

Despite many of the myths concerning crime in rural areas have been largely dispelled (Donnermeyer & DeKeseredy, 2014), the fact that rural criminology remains niche is highly problematic, especially when it comes to the administration of problem-solving courts. Although it was suggested several decades ago by Laub (1983) that much of what we know about urban crime likely applies to rural areas, the paucity of research makes it difficult to distinguish between what does and does not apply. To what extent does the body of knowledge related to

programing features, design, and current best practices developed in an urban and suburban context translate to a rural context? This is a question we are only beginning to be able to answer.

At the same time, we must be careful not to fall into a similar trap by assuming this question can be easily answered based on the same false stereotypes of idyllic rural life. Rural areas face many of the same challenges as other settings. Further, some of these challenges are compounded in rural settings due to the geographic location and isolation of these areas, including the availability of resources (including treatment providers), the travel distance required to reach providers, limited transportation, and a limited variety of services offered. Given that many rural areas are highly impoverished, the availability of funding for certain problem-solving court programs may be an additional hurdle. Not to mention that some rural areas may be more likely to endorse crime-control philosophies that are opposed to the mission of problem-solving courts in the first place.

While it is not possible to resolve all of these complications in a single issue, this issue's collection of papers begin to address these challenges by further contributing to the study of problem-solving courts in rural areas, primarily in comparison to other areas. The article "The Effect of Disproportionate Sanctioning on Client Noncompliance" by Vaske applies the tenets of deterrence theory to examine the impact of sanctioning on noncompliance. Interestingly, while many studies have considered the impact of certain and proportional sanctions on compliance and noncompliance, this is one of the first to consider the impact of disproportionality. Moreover, rather than attempting to weigh or objectively set the severity of the potential sanctions in some way, assessment of severity and proportionality are derived directly from the problem-solving court teams themselves.

The article "Treatment Needs and Gender Differences among Clients Entering a Rural Drug Treatment Court with a Co-Occurring Disorder" by Shaffer and colleagues explores the treatment needs of men and women with co-occurring disorders taking part in a drug treatment court in rural Massachusetts. While a number of notable differences emerge among these participants, especially on the basis of gender, the real value of this study is in the striking generalness of the needs of participants found in this court when compared to the literature more broadly. While more research is necessary, this article lends further credibility to the ability to generalize across settings.

Along similar lines, the article "In Their Own Words: Supports and Barriers to Recovery for Participants in Two Neighboring Drug Courts" by Palombi and colleagues uses participant reports from phase-up and graduation forms in order to examine perceived barriers and supports to recovery across a rural and an urban drug court. Like the above study, many similarities between the two settings were identified. However, important differences idiosyncratic to the rural court were also identified, suggesting the areas in which rural courts must further address the needs of their participants.

Finally, the most pressing issues documented in the rural drug court treatment track of the 2019 National Association of Drug Court Professionals are reviewed and summarized by Francis and Czarnecki for those unable to attend. These issues represent the areas that the foremost professionals in problem-solving court administration believe requires more robust research in the immediate future.

In developing this issue, we disseminated an open call on the topic but received few submissions. While this resulted in the current issue containing fewer manuscripts than previous issues, it further highlights the need for more

work (practical and academic) to focus on rural criminal justice programming. We hope this issue of the *Drug Court Review* provides additional insight into rural treatment courts and encourages readers to pursue research and practical enhancements through practitioner-researcher partnerships in the rural setting.

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THE EFFECT OF DISPROPORTIONATE SANCTIONING ON CLIENT NONCOMPLIANCE

Jamie C. Vaske[1]

VALUE STATEMENT

The current study shows that problem-solving courts should consider whether their sanctioning practices are proportional to the severity of clients' violations. Failure to deliver proportional sanctions may lead to an escalation in clients' noncompliance, especially among non-White participants.

ABSTRACT

Problem-solving courts attempt to shape clients' behavior through the use of sanctions for noncompliance. While previous research has examined whether offenders who receive sanctions are less likely to complete the program and more likely to recidivate, fewer studies have examined whether sanctions adhere to the tenets of deterrence theory, and whether sanctions that violate these tenets lead to changes in clients' behavior. The current study uses data from a veterans treatment court to examine: (1) how court team members rate the severity of common violations, (2) whether the team administers sanctions in a disproportionate manner based upon NADCP's ranking of sanctions, and (3) if disproportionate sanctioning is correlated with clients' escalating their noncompliance. The results show a significant level of disproportionate sanctioning practices for low- and moderate-level violations, especially among non-White clients. Further, upward departures are associated with clients subsequently increasing the severity of their misconduct (controlling for their general level of noncompliance overall and noncompliance within the past two weeks). The current study demonstrates the value of considering proportionality in sanctioning grids within problem-solving courts, from both a sanctioning and an equity point of view.

KEYWORDS

Sanction, proportionality, veterans treatment court

INTRODUCTION

One of the key components of problem-solving courts is to deliver sanctions in a way that aligns with deterrence theory. In particular, sanctions should be swift, certain, progressive (or graduated in response to continual noncompliance), and proportional to the severity of the offense (Taxman, Soule, & Gelb, 1999). Failure to adhere to these principles may lead to higher dropout rates in problem-solving courts and higher recidivism rates in the long term (Goldkamp, White, & Robinson, 2001; Kushner, Peters, & Cooper, 2014; Shaffer, 2011).

Given the potential iatrogenic effects emerging from sanctioning processes, there has been a considerable amount of attention given to the delivery of sanctions and their effects on clients' behavior within problem-solving courts. Shaffer's (2011) meta-analysis of 76 drug courts showed that programs that did not have a formal sanctioning system and did not swiftly respond to major infractions had higher recidivism rates than programs that had a standardized

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sanctioning system and swiftly imposed sanctions. These ideas of effective sanctioning have been further tested in the literature on swift, certain, and fair (SCF) sanctioning programs for probationers and parolees. Programs that emphasize swift and certain sanctioning have been shown to reduce substance use, probation revocation, recidivism, and reincarceration (DeVall, Lanier, & Hartmann, 2013; Hamilton, Campbell, van Wormer, Kigerl, & Posey, 2016; Snell, 2007).

Proportionality is central to effective sanctioning because clients may escalate their offending behavior if they perceive that: (1) the sanctioning process is unfair or unequitable across participants, or (2) if minor violations are punished the same as severe violations.

While the literature has devoted a significant amount of attention to the effects of sanction swiftness and certainty, fewer studies have examined the element of proportionality and its relationship to clients' noncompliance. Proportionality is central to effective sanctioning because clients may escalate their offending behavior if they perceive that: (1) the sanctioning process is unfair or unequitable across participants, or (2) if minor violations are punished the same as severe violations. In light of these considerations, the current study investigates: (1) how practitioners rank order common infractions within a problem-solving court, (2) if the imposed sanctions are proportional to the severity of the infraction, and (3) whether disproportionality in the sanctioning process leads to an escalation of client noncompliance (in terms of severity and quicker violation of program rules).

EXISTING RESEARCH

Deterrence theory is the leading philosophy that guides the implementation of punishment or sanctions within the criminal justice system. This theory emerged from the work of Cesare Beccaria (1764) and Jeremy Bentham (1789), who argued that individuals derive benefits from criminal behavior, and thus that institutions could prevent or control criminal behavior by creating an effective system of punishment. This effective system of punishment would be grounded in the principles of certainty, celerity, severity, and proportionality. More specifically, punishment would effectively deter or modify behavior when: (1) the probability of receiving punishment or negative consequences approached near certainty ($p = 1.00$), (2) it was delivered shortly after commission of the offense, (3) punishment was severe enough to offset the benefits of the offense, and yet (4) punishment was proportional to the severity of the offense, so that the harshest punishments were reserved for the most severe offenses.

Many problem-solving courts may lean upon sanctioning as a way to deter criminal behavior and promote compliance, but studies have shown that clients who receive harsh sanctions often have worse outcomes than those who do not receive severe sanctions. For instance, Goldkamp and colleagues' (2001) analysis of drug treatment court participants in Portland, Oregon and Las Vegas, Nevada found that participants who received a sanction, especially a jail sanction, had a higher probability of arrest for any offense, drug and nondrug, controlling for offender demographics and criminal history. Thus, the effect of sanctioning on recidivism could not be explained by the defendant's criminogenic risk, or that more criminally inclined offenders were likely to receive a jail sanction and

be rearrested. Their results also showed that individuals who were jailed for noncompliance were also less likely to graduate from the program (12%–27%) than participants who did not receive a jail sanction (27–44%). Similarly, Brown, Allison, and Nieto's (2011) analysis of 573 drug court participants showed that receiving a jail sanction within the first 30 days of the program was subsequently associated with commission of a new crime, absconding, or repeatedly testing positive for illicit substances.

Despite these negative associations, other studies have shown that sanctioning does not negatively impact participants' success. Hepburn and Harvey's (2007) quasi-experimental study of the drug treatment court in Maricopa County found that the threat of legal punishment was not associated with the average length of time within the program and whether clients successfully completed the program. Similarly, a study of 68 clients in a felony-level drug treatment court showed that sanctioning was not related to program retention, termination, or dropout (Guastaferro & Daigle, 2012); thus, the iatrogenic effect of sanctioning appears to be more nuanced than merely applying a sanction (Matejkowski, Festinger, Benishek, & Dugosh, 2011).

Beyond the effects of merely receiving a sanction and program outcomes, other studies have expanded upon the literature by investigating whether sanctions that are certain and progressive have an impact on clients' behavior (Kushner et al., 2014; Shaffer, 2011). Marlowe and colleagues (2005) found that the likelihood of producing negative drug screens and of graduating from the program were approximately 59% lower among the groups of participants who believed that their behavior would not be monitored or sanctioned (despite this perception changing across time); thus, clients need to believe their behavior will be monitored and responded to. Similar results were garnered from a study of 23 drug treatment courts, which found that recidivism rates were lower in courts that had a formal sanctioning policy and procedure, shared that procedure with the participants, and moderately adhered to the sanctioning policy (Zweig, Lindquist, Downey, Roman, & Rossman, 2012). Aside from increasing the certainty of punishment, courts have focused on using a graduated system of sanctions in which the first and second act of noncompliance may involve lower-level sanctions, such as writing an essay or increasing treatment, while subsequent violations will result in more punitive sanctions, such as curfew, electronic monitoring, jail, or termination (Arabia, Fox, Caughie, Marlowe, & Festinger, 2008). The hallmark study of graduated sanctions within the court system is an investigation of 160 felony drug pretrial defendants who were randomly assigned to either a standard docket or a graduated sanctions docket that followed a progressive sanctioning model in combination with judicial monitoring and drug testing (Harrell & Roman, 2001). The authors found that offenders on the graduated sanctions docket were less likely to test positive for illicit substances during pretrial (11% vs. 21%) or to be rearrested 12 months after sentencing (19% vs. 27%). These results provide evidence that a graduated sanctioning system, that is adhered to by staff and communicated to participants, may reduce criminal behavior both during and after the program.

The use of graduated sanctioning grids has been used extensively in probation and parole settings and can build upon researchers' understanding of sanctioning within problem-solving courts. SCF sanctioning models were popularized by Project HOPE and have been implemented in at least 28 states. Mirroring problem-solving courts' activities, Project HOPE and similar programs focus on: (1) explaining all rules and consequences to participants, (2) frequently monitoring compliance with rules through regular probation/parole meetings and random drug testing (e.g., at least 1-2 times per week), and (3) "swiftly" administering the sanction in response to

noncompliance. The conceptualization of swiftly administering sanctions varies across programs, with some SCF programs immediately imposing a sanction upon detection of noncompliance (Carns & Martin, 2011; Grommon, Cox, Davidson, & Bynum, 2013; Hawken & Kleiman, 2011; Hawken et al., 2016; Kunkel & White, 2013), others imposing sanctions within one to 96 hours of detection (Devall et al., 2013; Neal & Shannon, 2013), and still others administering sanctions nine to 15 days postviolation (Harrell, Mitchell, Merrill, & Marlowe, 2004; Lattimore et al., 2016; O'Connell, Brent, & Visher, 2016).

Overall, the research suggests that programs that immediately impose sanctions may be more effective (Hawken & Kleiman, 2011) than programs in which there is a lag between noncompliance and receipt of a formal sanction (Lattimore et al., 2016; O'Connell et al., 2016). The strongest evidence for this notion emerges from Grommon et al.'s (2013) study of moderate-risk parolees who were randomly assigned to one of three conditions: (1) an experimental group who had frequent, random drug testing (with instant results) and were immediately jailed for any positive drug screens or failing to report; (2) a control group who had frequent, random testing, but did not have instant drug test results or immediate sanctions; and (3) a control group who had neither frequent drug testing nor immediate sanctions. The results showed that the experimental group had fewer positive drug tests and lower recidivism rates at 6 months and 18 months than either control group. These positive findings stand in stark contrast to the null results from Delaware's Decide Your Time (O'Connell et al., 2016), Maryland's Break the Cycle (Harrell et al., 2003, and the HOPE Demonstration projects (Lattimore et al., 2016), where sanctions were formally imposed 9-15 days after the violation was detected.

Other structured sanctioning programs have focused on enhancing the proportionality of sanctioning, rather than increasing the swiftness of punishment. Washington's Swift and Certain (SAC) program put forth a series of graduated sanction for probation violations based upon the severity of the sanction and the number of prior sanctions. A quasi-experimental study of high-risk probationers found that SAC participants were less likely to be jailed (24% vs. 28%) or have a prison confinement (3.1% vs. 19.2%) after a violation, and had 20%–30% lower odds of a felony, violent, and/or property conviction at the 12-month follow-up, relative to a historical comparison group that was not subject to SAC procedures. A cost-benefit analysis of SAC showed a $16 return on investment for every dollar invested in SAC (Hamilton et al., 2016). While Washington's SAC program produced reductions in crime for probationers, other proportionality grids have failed to reduce recidivism for parolees in Ohio (Martin & Van Dine, 2008; Steiner, Travis, & Makarios, 2008) and California (Turner, Braithwaite, Kearney, Murphy, & Haerle, 2012).

The evidence above suggests that sanctions may effectively prevent criminal behavior for some populations when sanctions are certain, swift, progressive/graduated, and proportional to the severity of the offense. The problem-solving court literature has consistently examined the effects of sanction certainty and progressiveness on clients' behavior and found them to be important elements to providing effective sanctions. Fewer studies have investigated whether disproportionality in sanctioning impacts clients' behavior. Disproportionality in sanctioning may exacerbate clients' noncompliance because: (1) individuals become defiant when they perceive sanctions as illegitimate or unfair (Sherman, 1993), or (2) individuals are not deterred from committing more serious violations if the consequences are the same for both minor and serious offenses.

In light of these considerations, the current study investigates the following questions:

1. How do staff rate the seriousness of violations within a problem-solving court?
2. Based upon staff members' ratings on the seriousness of violations, do they administer sanctions that are proportionate to the seriousness of these violations?
3. Does disproportionality in the sanctioning lead to clients' subsequently committing more serious infractions and in a shorter time frame?

METHODS

PARTICIPANTS

The data for the current study come from a felony-level, postplea, preadjudication veterans treatment court located in a Southeastern state. To be eligible for the court, potential clients must be at least 18 years of age and have: (1) a substance use disorder or mental health problems, as measured by the TCU Drug Screen V or Modified Mini Screener; (2) moderate or high criminogenic risk and needs, per the state probation's risk-needs assessment; (3) any military discharge status other than dishonorable; and (4) a charge of a class E felony or lower (excluding any sex, gang-involved, or violent offenses). The court has a capacity of 30, but typically operates with 20 clients or less. The average age of clients is 46.08 years of age, with 38% of clients self-identifying as African American, 62% being Caucasian, and 2.86% identifying as Hispanic. Approximately, 97% of clients are assessed as high-risk, high high-need clients. Descriptive statistics showed that 80% of clients who were not receiving disability entered the court unemployed, and 50% of all clients were homeless or living in a homeless shelter or transitional housing upon entry to the court. Almost 40% of clients have been terminated from the program with 83% of those terminated being removed for receiving new criminal charges. The court's policy states that participants can be automatically terminated from the program for committing a new criminal act of physical violation; making threats to VTC staff/mentors/other court participants; and/or are a public safety risk as determined by the chief probation officer, supervising probation officers, and the district attorney. A participant can possibly be terminated for repeated non-compliance or a new arrest.

The court is divided into a low-risk/high-needs track and high-risk/high-needs track. The low-risk track comprises four phases that take a minimum of 12 months to complete. The high-risk track takes a minimum of 16 months of complete and comprises five phases. All phases require weekly or biweekly contact with the probation officer and court coordinator, random drug testing, involvement in treatment or self-help groups, and communication with a mentor that is assigned by the court. Staff members would use NADCP and NDCI's list of sanctions and incentives when responding to clients' behavior, but this did not involve discussions of whether sanctions or incentives were proportional to the clients' behavior.

The current study uses three data sources to examine the proportionality of sanctioning within the court: (1) an online survey of the 12 staff asking them to rate the severity of 20 different offenses; (2) an incident-level dataset that captures all acts of client noncompliance from June 2015 to June 2018 to help determine whether staff are sanctioning proportionally to the severity of the offense, according to the NADCP grading of sanction severity (n = 177); and (3) an incident-level dataset of only subsequent violations to determine whether the sanctioning practices of the prior violation (i.e., disproportionality, use of jail, treatment referrals, delivered by the judge rather than

probation officer) impacted the time to the current violation and the severity of the current violation (n=150). The study was approved by the principal investigator's Institutional Review Board.

STAFF SURVEY

An anonymous survey was electronically distributed to 12 staff members on the treatment team, including the judge, prosecutor, defense attorney, court coordinator, probation chief, two probation officers, a law enforcement officer, a treatment provider, a clinical care coordinator, a veterans justice outreach specialist, and the mentor coordinator. These staff members were presented with a list of 20 common acts of noncompliance and the following instructions: "Please rank each act of noncompliance as a low-level/minor, moderate-level, or high-level/severe offense. Please disregard whether the act is a first-time or multiple-time offense—this will be considered at a later date. For the purposes of the survey, assume that it is a first-time offense." Sixty-seven percent of staff members completed the survey.

INCIDENT-LEVEL DATA OF ALL VIOLATIONS

The incident-level data of all violations included the following variables for each act of noncompliance (n = 177): (1) the act of noncompliance and whether it was rated as a minor-, moderate-, or high-level violation by staff per the staff survey; and (2) whether the resulting sanction was low, moderate, or severe per the National Association of Drug Court Professional's Incentive and Sanctioning grid. For instance, verbal warnings and essays were categorized as low-level sanctions, while increased reporting and community service were considered moderate-level sanctions. High-level or severe sanctions included being ordered to report daily for five to seven days, electronic monitoring (including SCRAM and CAM), jail, and termination. A sanction was considered proportional when the severity of the sanction aligned with the staff members' perception of the severity of the offense. For instance, a proportional sanction would occur if a minor violation resulted in a low-level sanction, or a moderate-level violation corresponded to a moderate-level sanction. A sanction was conceptualized as disproportionate when the severity of the response did not parallel the severity of the violation (e.g., a severe sanction for a moderate- or minor-level offense, or a low-level sanction for a moderate- or high-level violation).

Two measures of disproportionality were used: (1) upward departures captured whether the sanction was one or two levels more severe than what was expected (e.g., a low-level sanction was expected but a moderate or severe sanction was imposed), and (2) downward departures tapped into whether the sanction was one or two levels below than what was expected (e.g., a moderate-level response was expected but the team administered a low-level sanction). The upward departures variable was coded as 1 = sanction was one or two levels more severe than expected, whereas 0 = sanction was proportional or was more lenient than expected. The downward departures variable was coded so that 1 = sanction was one or two levels more lenient than expected, whereas 0 = sanction was proportional or was more severe than expected.

This file also included several covariates that were used to explore the potential reasons for disproportionate sanctioning. Number of priors for the same offense and number of prior violations overall attempted to capture the clients' overall history of noncompliance for either the same offense or multiple types of offenses throughout their time in the court. Multiple violations for the same offense at this session (0 = no, 1 = yes) and multiple violations for different offenses at this session (0 = no, 1 = yes) took into account whether the client violated the same rule

multiple times since the last court session (e.g., three positive drug screens within the past week) or engaged in multiple forms of noncompliance within the past two weeks (e.g., a positive drug screen and violating curfew). The models also controlled for whether the sanctions were delivered by the judge (1) or a probation officer (0). There has been some discussion within the literature that sanctions imposed by a judge may be more effective than the same sanction was delivered by a probation officer (O'Connell et al., 2016). Also, the VTC probation officers would immediately impose a sanction approximately 10% of the time (outside of staffing), and thus their sanctioning behavior (under the state probation noncompliance grid) may not align with NADCP's conceptualization of a low, moderate, or severe sanction. Finally, the data included variables for clients' race (0 = White, 1 = non-White), age at the time of the violation, phase within the court (Phase 1 to 5), whether the defendant entered the court through a new felony offense or a probation violation on a felony or a misdemeanor or driving while intoxicated offense (1 = felony as the highest charge, 0 = misdemeanor or DWI was the highest charge), and whether the defendant was entering the court on a drug or alcohol charge (1 = drug or alcohol charge, 0 = other).

INCIDENT-LEVEL DATA OF SUBSEQUENT VIOLATIONS

The incident-level data of subsequent violations excluded all first-time violations and captured the sanctioning practices of the previous sanction (n = 150). These data were used to examine the research questions: (1) if the team disproportionately sanctioned for the previous act of noncompliance, were clients more likely to violate additional rules faster (than if the prior sanction was proportionate)? and (2) were clients likely to escalate their noncompliance in subsequent events (e.g., the client's first violation was a low-level act, whereas the next violation was a moderate or severe offense)? The dependent variables for these models included: days between sanctions and escalation of noncompliance. The data for days between sanctions was extracted from the biweekly staffing notes and the administrative data that recorded the dates of each sanction. Many times, the court administered sanctions at the biweekly court session, although there were times when probation officers would apply a sanction outside of the court session (such as taking into custody for a new crime). This dependent variable was a proxy for days between violations as the data for each specific type of violation (i.e., missing a treatment session) was not always available. Escalation of noncompliance was coded as: 1 = current violation (e.g., severe offense) was more serious than the immediate prior violation (e.g., moderate or minor offense), or 0 = current violation is less severe or same level of severity as the immediate prior violation.

This data file also included a number of exogenous variables that were used to predict the time to new offense and escalation of behavior. Upward departure and downward departure variables were included to capture whether the prior sanction was too severe or lenient. Additional covariates included: (1) whether the defendant entered the court through a new felony offense or a probation violation on a felony or a misdemeanor or driving while intoxicated offense (1 = felony, 0 = misdemeanor or DUI); (2) whether the defendant was entering the court on a drug or alcohol charge (1 = drug or alcohol charge, 0 = other); (3) a dichotomous variable to capture whether the judge (1) or a probation officer (0) administered the sanction; and (4) whether the prior response included a jail sanction (0 = no, 1 = yes) or the combination of a sanction (i.e., electronic monitoring) and a treatment response (0 = no, 1 = yes). Prior research has shown that higher-risk offenders, such as the clients in the current sample, respond best to a combination of restrictive sanctions and treatment responses (Martin & Van Dine, 2008). Finally, the models included controls for participants' race (0 = White, 1 = non-White) and age at the time of violation.

Table 1. Percentage of Staff Rating Violations as Low, Moderate, or Severe

	Low	Moderate	Severe
Low-level category			
Positive urinalysis for drugs	75.0	25.0	0.0
Positive EtG	75.0	25.0	0.0
Missing a treatment group	62.5	37.5	0.0
Moderate-level category			
Getting a traffic charge	12.5	75.0	12.5
Missing a probation meeting	25.0	75.0	0.0
Violating curfew	37.5	62.5	0.0
Associating with known drug users	37.5	62.5	0.0
Masking a drug screen	12.5	50.0	37.5
Possession of drugs or paraphernalia	12.5	50.0	37.5
Lying	37.5	25.0	37.5
Severe-level category			
Threaten a staff member with violence	0.0	0.0	100.0
Threaten a client with violence	0.0	0.0	100.0
Possession of a weapon	0.0	0.0	100.0
Defrauding a drug screen	0.0	12.5	87.5
Absconding	0.0	12.5	87.5
Failure to appear in court	0.0	25.0	75.0
Arrest for a nontraffic offense	0.0	25.0	75.0
Showing up to court under the influence	12.5	25.0	62.5
Leaving county or state without permission	0.0	37.5	62.5
Not completing prior sanction	12.5	37.5	50.0

RESULTS

STAFF MEMBERS' PERCEPTIONS OF VIOLATIONS

Table 1 shows staff members' perceptions of the severity of 20 common violations within the court. As shown in the table, there is considerable consensus on what constitutes a low-level violation (i.e., positive drug and alcohol screens) and some high-level violations. For instance, 75%–100% of staff members agreed that new criminal offenses, failure to appear in court, absconding, defrauding a drug screen, possessing a weapon, and threatening a staff member or client constituted high-level violations. Also, 75% of staff members rated missing a probation meeting and getting a traffic charge as moderate-level violations, and positive alcohol or drug screens were

considered low-level acts of noncompliance.

Despite these similarities, there was considerable disagreement regarding the severity of some violations. The most notable example is the violation of lying, which 37.5% of staff members rated as a low-level violation, 25% a moderate-level violation, and 37.5% a high-level violation. The heterogeneity in these ratings speaks to the staff members' difficulty in assessing whether this is a proximate or distal goal. In discussions with staff, some team members conceptualize lying as a component or survival tactic common to addiction, while other staff members perceive lying to be a proximate goal that clients can achieve early on in the program. These differences in opinion bear out in the data presented in Table 1. For the purposes of the analyses, lying was conceptualized as a moderate-level violation and all models were assessed for the impact of this decision (by either stratifying the analyses by specific type of violation or removing lying from the moderate category). Subsequent results were consistent with lying being conceptualized as a moderate-level violation.

PROPORTIONALITY OF STAFFS' SANCTIONING PRACTICES

Before turning to the proportionality of sanctioning practices, it is important to review the frequency of sanctions and offenses within the court. Descriptive statistics show that the majority of violations within the court are low-level infractions (62.71%), with the remainder being almost evenly split between moderate (19.21%) and severe violations (18.08%). The most common violations were missing a treatment group (29.14%) and testing positive for drugs (27.43%), both rated low-level violations by staff. Conversely, the most common sanctions within the court are severe sanctions (47.43%), followed by low-level (26.86%) and moderate-level sanctions (25.71%). The most common sanctions were jail (24.71% (severe)), verbal warning (12.07% (low)), electronic surveillance (9.20% (severe)), essay (9.20% (low)), community service (7.47% (moderate)), and increased reporting (7.47% (moderate)).

Table 2 displays a cross-tabulation of the severity of sanctions by the severity of infractions. The table shows a pattern of both proportionality (in regard to severe violations) and disproportionality (in terms of low- and moderate-level violations). The table shows that severe infractions are more likely to receive a severe sanction (81.25%) than a moderate- (15.63%) or low-level sanction (3.13%). In contrast, there is disproportionality in the sanctioning of moderate-level offenses, with the majority of moderate-level violations (61.76%) receiving a severe sanction such as electronic monitoring, jail, or termination. Also, almost two-thirds of low-level infractions result in something other than a low-level sanction.

A logistic regression model is used to explore the potential explanations for disproportionality in sanctioning. None of the exogenous variables are significantly related to the likelihood of downward departures in bivariate logistic regression models. These null findings may be a result of a small number of cases falling into the downward departure category (n = 12). Results show, however, that the odds of upward departures are 3.45 times higher for non-White clients ($p < .05$) and 1.38 times higher for participants with a greater number of prior violations for the same infraction ($p < .01$), controlling for the clients' demographics, their level of noncompliance in general, and their pattern of noncompliance within the past two weeks.

Given the upward departures for low- and moderate-level violations, zero-order Spearman's rho correlations are used to explore whether any of the independent variables help explain upward departures for these two categories

Table 2. Crosstabulation of Severity of Sanctions by Severity of Violations

	Low-level violation	Moderate-level violation	Severe-level violation
Low-level sanction	**36.70%**	**17.65%**	**3.13%**
Moderate-level sanction	**30.28%**	**20.59%**	**15.63%**
Severe-level sanction	**33.03%**	**61.76%**	**81.25%**

$x^2 = 28.16, p < 0.001$

Table 3. Logistic Regression of Escalation of Noncompliance on Type of Departure and Covariates

	b	OR	P
Upward departures	**0.856**	**2.354**	**0.048**
Downward departures	**-1.062**	**0.345**	**0.346**
Felony offense	**0.860**	**2.365**	**0.231**
Drug or alcohol offense	**0.327**	**1.388**	**0.500**
Judge administered sanction	**-0.959**	**0.383**	**0.195**
Prior response included jail	**-0.893**	**0.409**	**0.137**
Combination of sanction and treatment response	**-0.055**	**0.946**	**0.919**
Days between violations	**-0.003**	**0.996**	**0.469**
Non-White	**-1.155**	**0.314**	**0.056**
Age at time of violation	**0.028**	**1.029**	**0.085**

Pseudo-R2 = 0.137

of violations. For low-level violations, upward departures are higher among clients who enter into the court with drug or alcohol violations (r = .19, p = .03), who have repeatedly violated the same rule within the court (r = .25, p < .01), and who have a greater number of violations overall (r = .24, p < .01). These findings may speak to the difficulty in responding to substance-using clients who repeatedly return to use and fail urinalysis tests. There is also a marginally significant correlation between being non-White and upward departures for low-level violations (r = .16, p = .09). For moderate-level violations, upward departures are related to whether the client incurs multiple violations for different offenses (at one court session) (r = .37, p = .02). Also, upward departures are less likely to occur for moderate-level violations when the judge delivers the sanction rather than the probation officer delivering the sanction (r = -.40, p = .01).

EFFECTS OF DISPROPORTIONALITY ON CLIENTS' SUBSEQUENT NONCOMPLIANCE

The last set of analyses use data from the incident-level data file of only subsequent violations. These analyses assess whether upward departures in sanctioning impact the timing of new sanctions and the escalation of clients' noncompliance. A negative binomial regression model is used to investigate whether departures are related to the number of days between sanctions. This model is chosen since the number of days between sanctions is positively

skewed with the standard deviation (SD = 49.86) being larger than the mean (X = 46.24). The results show that none of the independent variables are related to the timing of acquiring a new sanction.
For the second question, a logistic regression model is used to estimate the effects of upward departures on the escalation of noncompliance. The findings reveal that upward departures are positively related to the escalation of clients' noncompliance (Table 3). More specifically, the odds of escalating one's noncompliance is approximately two times higher among clients whom received a disproportionately severe sanction for their prior violation (OR = 2.23, p = .037). The effect of the upward departure variable persists despite controlling for clients' demographics, criminal history, number of days between sanctions, and the application of treatment or supportive services (OR = 2.35, p = .048).

DISCUSSION

The intellectual roots of today's sanctioning practices are grounded in Jeremy Bentham and Cesare Beccaria's work. While the field has staunchly adhered to the principles of swiftness, certainty, and severity, the principle of proportionality has been overshadowed in much of the discussion on how to punish and effectively control behavior. This study sought to contribute to this aspect of literature by examining the following questions: (1) how do staff members rate the severity of common violations within a problem-solving court? (2) to what degree are sanctions proportional to the severity of clients' infractions? (3) what may lead to disproportionate sanctioning for low- and mid-level violations? and (4) how does disproportionate sanctioning impact clients' behavior?

While the field has staunchly adhered to the principles of swiftness, certainty, and severity, the principle of proportionality has been overshadowed in much of the discussion on how to punish and effectively control behavior.

Overall, the results showed that there is considerable consensus as to what constitutes a low-level violation within the court. Despite this consensus, there is a great amount of heterogeneity in responding to low-level violations with sanctions being almost evenly split between low-, moderate-, and high-level sanctions. Part of the heterogeneity in responses to low-level violations was explained by clients' lack of compliance overall and their continual violation of the same rules. This makes sense from a programmatic perspective: The initial violation of a low-level rule may result in a warning or an essay, whereas the second violation results in a higher-level response such as community service or daily reporting. Observations from the court do indicate that team members tried to graduate sanctions, but this was not a formal policy that was shared with staff members and program participants.

Furthermore, the data revealed that there was some uncertainty on how to rate some moderate-level violations, which may have translated into disproportionate or severe sanctions for clients who committed moderate-level violations. In particular, staff members were split on whether to rate lying, possession of drugs or drug paraphernalia, and masking a drug screen as either a moderate- or high-level infraction. These violations most often resulted in a severe sanction (60%–100% of the time) and likely occurred when the client engaged in multiple forms of noncompliance in a short time frame and when the probation officer delivered the sanction rather than the judge.

It appears that when there is a lack of consensus on how to rate a behavior and how to respond (especially in the face of multiple violations), team members will resort to the highest-level sanctions (typically jail or quick dips).

...upward departures negatively impact clients' behavior by increasing the likelihood that they will escalate their misconduct.

As shown in the final part of the analyses, upward departures negatively impact clients' behavior by increasing the likelihood that they will escalate their misconduct. For instance, a client in Phase 2 was sanctioned with electronic monitoring (severe sanction) because they missed multiple treatment meetings that week (low-level violation). Within the next two weeks, they had received a criminal charge for driving with their license revoked (moderate-level violation) and were sanctioned with five days in jail (severe sanction).

One finding should be noted before discussing the limitations and policy implications of the study. The data suggest that there may be a lack of equity in sanctioning practices when comparing outcomes for non-White clients to White clients. Approximately 38% of the VTC clients are non-White, yet 58% of clients in the sanction data are non-White. Also, non-White clients were more likely to receive an upward departure (OR = 3.45) compared to White clients, controlling for the number of priors for the same violation, number of priors overall (to date), incurring multiple violations at the same time, phase of the program, age, whether they were a drug offender, and whether they were a felony offender. Thus, despite controlling for general patterns of noncompliance, non-White offenders received disproportionate punishments relative to White offenders. This conclusion differs from that of previous studies, which found that race was not associated with receiving a sanction (Callahan, Steadman, Tillman, & Vesselinov, 2013; Guastaferro & Daigle, 2012) or that White participants fared worse in some sanctioning outcomes than non-Whites (Shannon, Jones, Nash, Newell, & Payne, 2018). Yet, it should be noted that previous research has examined only whether one did or did not receive a sanction, and it has not investigated whether the characteristics of the sanctioning process—swift, certain, progressive, and proportional—vary across racial and ethnic groups. The current study's findings and those from Gallagher (2013) suggest that future research should continue to explore disparities in sanction processes across racial and ethnic groups.

The racial inequity in sanctioning practices are important because disproportionate sanctioning practices may facilitate a cascade of negative events that contribute to poorer outcomes of non-White defendants in the criminal justice system. If non-White participants are more likely to receive disproportionate sanctions, this may increase such clients' likelihood of: (1) escalating misbehavior in subsequent violations, (2) risking termination from the program, (3) receiving a suspended incarceration sentence, and (4) experiencing the collateral consequences of a criminal conviction and/or incarceration. Thus, problem-solving courts may inadvertently further contribute to the racial inequities seen within the criminal justice system. These hypotheses fit within the literature, which shows that non-White defendants are less likely to complete drug courts (Dannerbeck, Harris, Sundet, & Lloyd, 2006), more likely to be incarcerated for drug offenses (Brennan & Spohn, 2008), and thus more likely to experience the collateral consequences that result from a criminal conviction (Chin, 2002).

Figure 1. Menu-Style Sanctioning Grid

Directions: Staff should choose a treatment-oriented response and a sanction in response to a client's noncompliance. Team members should issue lower level sanctions before escalating too higher-level sanctions, unless the client has a history of noncompliance or there are aggravating circumstances. **Consider:** Client's risk/needs level, what phase they are in, is this a proximal or distal behavior, and overall level of compliance for that review period.

Lower level offenses	1st offense	2nd offense (of same behavior)	3+ offense (of same behavior)
• Positive drug screen(s) • Positive EtG(s) for alcohol • Miss treatment group(s) • Late to report or Coordinator, Probation, or treatment group	*Treatment oriented response* • Remind of obligations • 3pg essay • Carey Guide • Behavior chain • Thinking report • Skill development • Contact with mento/sponsor	*Treatment oriented response* • Make up missed treatment class • Attend one additional class/ session	*Treatment oriented response* • Reassessment • SAARPT or ADACT • Inpatient/DART/Swain • 1st at Blue Ridge or similar halfway hour
	Low level sanction • Verbal warning from PO or CPPO • Call VJO or Coordinator to confirm treatment appointments for next 5 days • 4 extra CS hrs • 3 days curfew *High level sanction* • Meet w/ coordinator for 5 mornings for 1 week • Watch court for 5 days • 8 extra CS hrs • 5 days curfew	*Low level sanction* • Call VJO or Coordinator to confirm treatment appointments for next 7 days • Suspend sanction (EM) • Reinstate probation fees • 8 extra CS hrs • 5 days curfew • Watch court for 5 days • One extra drug screen *High level sanction* • Meet w/ coordinator for 5 mornings too next 10 days • 16 extra CS hrs • 30 days EM • SCRAM 30 days • 7 Days curfew • Two extra drug screens • 24 hours in jail	*Low level sanction* • Deny travel request • 16 extra CS hrs • Increase reporting court • 45 days EM • SCRAM 45 days • 7 days curfew • There extra drug screens • 48 hours in jail • Written warning *High level sanction* • 20 extra CS hrs • 60 days EM • SCRAM 60 days • 14 days curfew • Four extra drug screens • 72 hour quick dip • Final contract

While the current study expands upon previous research by empirically demonstrating that proportionality is important to behavior management in problem-solving courts, it has at least four limitations. First, the current study utilized data from a veterans treatment court that had only male participants, 97% of whom were high-risk, high-need clients. As such, these results may not generalize to other types of problem-solving courts or to veterans treatment courts that serve younger or more heterogenous populations in terms of gender and criminogenic risk. Second, the court does not have a management information system that captures noncompliance when it occurs,

and so noncompliance often comes to light during the biweekly staffing. If the actual dates of noncompliance are not noted on the staffing notes, the number of days between acts of noncompliance are recorded based upon the date the act is discussed in team staffing. Inspection of the variable showed that 20% of incidents were recorded as occurring within 14 days of the last day of noncompliance, indicating that the specificity of this variable may be compromised in some respects. Third, various sanctioning behaviors were grouped together based upon NADCP's designations, thus obscuring the granular nature of sanctioning in the analyses. The grouping together of different sanctions—such as considering both electronic monitoring and jail as severe sanctions—may mask some of the nuances in sanctioning behavior. Also, the court would routinely attempt to graduate a sanction—such as issuing four hours of community service for a first-time offense, then eight hours for a second offense—yet the data only captured this as a moderate-level sanction. Finally, while the sample included data across three years, the sample was modest in size and smaller effects may not have been detected by traditional statistical tests. Power analyses showed that odds ratios would need to be at least 1.70 or higher in order to reach 80% statistical power, suggesting that some null effects could be a result of sample size.

In spite of these limitations, there are at least two broad implications that emerge from these findings. First, problem-solving court teams should assess whether their sanctioning practices are proportionate to the severity of violations occurring in the court. If sanctioning practices do not exhibit proportionality (as shown here), they should work to enhance proportionality through sanctioning grids and other structured decision-making tools. The current court here revised their sanctioning practices to align with the standards outlined by the National Institute of Corrections and the Center for Effective Public Policy (Carter, 2015). Some of the key changes included instituting a menu-style sanctioning grid (Figure 1), communicating this grid to all staff and participants, and creating policy to address key issues such as how to respond when multiple acts of noncompliance occur simultaneously and how probation officers should respond to acts of noncompliance within the scope of the state-level probation policies. Second, the current study showed a disproportionate percentage of non-White clients in the sanctioning data and a greater number of upward departures for non-White clients. Aside from monitoring equity in the use of the sanctioning grid, the data may point to a need to enhance services for non-White clients. Observational data from the court suggests that African American clients who abuse cocaine prior to entering the court often relapse and are terminated from the court due to continual relapse in later phases, after all treatment resources had been exhausted. This aligns with findings from Shannon et al. (2018), which showed that the association between race and treatment court completion became nonsignificant once cocaine use within the past 30 days and other factors were taken into account. One can speculate that non-White clients who use cocaine may continually relapse and receive sanctions for these behaviors because they are not receiving appropriate treatment. These behaviors may point to a need to explore medication assisted treatment for cocaine dependence (Kampman, 2005) and the use of culturally specific treatment providers (Gallagher & Nordberg, 2018) and treatments such as HEAT (Marlowe et al., 2018).

In conclusion, the current study illustrated that disproportionate sanctioning practices may correlate with clients escalating their behavior to more serious forms of noncompliance. Part of the disproportionality in sanctioning practices may stem from problem-solving court staff having differing opinions on what constitutes a moderate-level violation and how to respond to recurring low-level violations. It is hoped that staff members' consensus around the severity of offenses and the adoption of a structured sanctioning process will increase proportionality of sanctioning processes and eventually lead to equality in sanctioning outcomes across participants.

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TREATMENT NEEDS AND GENDER DIFFERENCES AMONG CLIENTS ENTERING A RURAL DRUG TREATMENT COURT WITH A CO-OCCURRING DISORDER

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VALUE STATEMENT

Findings from this study suggest gender-responsive implications for specialty court management of participants with co-occurring mental health and substance use disorders in rural areas. These implications include suggestions for drug treatment court staff (court staff and integrated behavioral health practitioners), including how they might think about assessment, treatment planning, and innovative ways of augmenting evidence-based care in rural areas that lack access to services.

ABSTRACT

Objective: Although drug treatment courts (DTCs) have been well established, research focused on the needs of DTC clients in rural communities is nascent. This pilot study fills this gap by reporting on treatment needs and gender differences among a rural Massachusetts DTC with Co-Occurring Mental Health and Substance Use Disorders (CODs). **Methods:** DTC intake data were analyzed for 73 participants (57.5% males, 42.5% females). **Results:** This rural sample reported substantial criminal justice (CJ) histories, and lifetime behavioral health and medical needs, which included: 74% anxiety, 68.5% depression, 71% opioid use disorder (with an average of 1.67 prior nonfatal overdoses), and 36% sharing needles. Physical health needs included chronic medical conditions (26%), Hepatitis C (44%), and dental care (43.8%). Social and support needs included 49% unstable housing at intake and 52% unemployment. Regarding gender differences, males had longer CJ involvement, alcohol use, and more needle sharing compared to females. Females reported more trauma, sexual abuse, interpersonal violence, chronic and recent medical conditions, unstable housing, and a lower rate of employment than males. **Conclusions:** These findings have implications for specialty court management, treatment planning, and for integrating treatment alongside DTCs to holistically address participant treatment needs.

KEYWORDS

Specialty courts, co-occurring disorders, addiction, mental health, alternatives to incarceration, criminal justice, rural, drug court, peer support, treatment needs, gender

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IRB NOTE

Per UMMS IRB, this study was deemed evaluation and not human research. Publications are an allowable activity under this determination. For documentation, please contact the authors or UMMS IRB.

INTRODUCTION

Findings from recent epidemiological investigations indicate that substance use in rural America has increased to the point where it nearly equals, if not exceeds, the rates observed in suburban and urban areas (Dew, Elifson, & Dozier, 2007). Moreover, chronic drug users from rural areas have significantly higher rates of lifetime drug use, as well as higher rates of drug use in the 30 days prior to incarceration, than chronic drug users from urban areas (Warner & Leukefeld, 2001; Dew et al., 2007). As drug overdose deaths in the United States continue to rise (Dew et al., 2007), it is important to gain a better understanding of clients' needs and of how to optimally provide treatment and support services. This is especially critical in rural communities that have high rates of substance use, as well as elevated rates of co-occurring mental health and substance use. Many rural communities are also designated as Mental Health Professional Shortage Areas (MHPSAs) and lack adequate levels of co-occurring mental health and substance use disorder (COD) care and services (Browne et al., 2016; Center for Disease Control and Prevention, 2017). Furthermore, due to the limited supply of COD services in rural communities, criminal justice institutions often end up serving as the provider or intermediary to link individuals to COD services (Staton-Tindall et al., 2015).

In response to the high rates of substance use disorders among criminal justice-involved populations, Drug Treatment Courts (DTCs) were developed as a treatment alternative to jail or prison and are now the most well studied alternative to incarceration programs within the CJ system (Friedmann, Taxman, & Henderson, 2007; Fox et al., 2015). Studies report that up to 70% of those served in a DTC have a COD (Peters, Kremling, Bekman, & Caudy, 2012; Cooper, 1997). DTCs share a number of common practices, including a specialized court docket with regular appearances in front of a dedicated judge. The judge receives input from probation officers and other members of the drug court team, conducts ongoing monitoring of client participation in community-based treatment, and provides sanctions and incentives to aid participants in their recovery process (Brown, 2010).

DTCs commonly serve individuals with CODs and assess needs via a Risk-Need-Responsivity (RNR) framework (to match the intensity of treatment to level of risk for reoffending, connect behavioral health needs to criminogenic risk and needs, and link clients to services tailored to their individual attributes). Studies to date have largely focused on basic characteristics and factors that predict: CJ recidivism reduction adherence to the DTC model or facilitators and barriers to treatment engagement (Gaba, Vargas, Pinals, Vanmali, & Smelson, n.d., Steadman, Davidson, & Brown, 2001; Taxman & Bouffard, 2002; Evans, Huang, & Hser, 2011). Furthermore, DTC literature has not

focused on gender-specific treatment needs in rural communities, despite the fact that broader Criminal Justice (CJ) and behavioral health research has shown disparities in needs between females and males, as well as between justice-involved individuals in rural and urban areas. For example, females involved in the CJ system are significantly more likely than males to experience symptoms of psychiatric disorders, trauma, experience sexual abuse, parental stress, and unstable housing; they also generally receive less economic and family support, making it difficult to transition out of the system (Mahmood, Vaughn, Mancini, & Fu, 2013; Morse et al., 2014; Finlay et al., 2015; Datchi and Ancis, 2017; Shannon, Jackson Jones, Perkins, Newell, & Payne, 2018; Singh, Cale, & Armstrong, 2018). Alternatively, males are more likely than females to have extensive arrest and conviction histories in the CJ system, engage in risk-taking behavior, use multiple illicit drugs, and have fatal overdoses (Substance Abuse and Mental Health Services Administration, 2010; Walklate, 2004). However, less is known about female specific characteristics and needs in DTCs (Fielding, Tye, Ogawa, Imam, & Long, 2002; Morse et al., 2014; Brewer & Heitzeg, 2008).

Furthermore, DTC literature has not focused on gender-specific treatment needs in rural communities, despite the fact that broader Criminal Justice (CJ) and behavioral health research has shown disparities in needs between females and males, as well as between justice-involved individuals in rural and urban areas.

Despite the research on rural COD treatment needs and DTCs, there is a dearth of research examining the gender specific needs among rural DTC participants with COD. This lack of information on treatment needs among rural DTC participants with a COD and by gender is unfortunate and further compounded by the fact that many DTCs across the US are located in MHPSAs (McClelland, Teplin, Abram, & Jacobs, 2002; Abram, Teplin, & McClelland, 2003; Zlotnick et al., 2008; Staton-Tindall et al., 2015). This paper fills this gap by examining rural and gender-related treatment needs in a rural Massachusetts DTC population with a COD, which offers an opportunity to have courts think about how to maximize often-limited DTC resources. Additionally, this study has important implications for a gender-responsive application of Risk-Need-Responsivity (RNR) principles in DTCs (Andrews, Bonta, & Hoge, 1990; Andrews & Bonta, 2006; Serin & Lowenkamp, 2015).

METHODS

STUDY DESIGN

This pilot study included 73 participants (42 males, 31 females) with COD who completed a comprehensive intake assessment in a rural Massachusetts DTC. Communities served by this DTC have federal designations either for rural (defined by HRSA) and/or meeting eligibility for rural health grants from HRSA (Health Resources and Services Administration, 2019), in addition to being located in MHPSAs.

We enrolled individuals in this pilot study if they: (1) were to participate in a COD program that was integrated within the DTC; (2) were age 18 or older; (3) met DSM-IV-TR (American Psychiatric Association, 2000) Axis I psychiatric disorder criteria; (4) exhibited current substance use or dependence as confirmed by the Addiction Severity Index-Lite (ASI-Lite) (McLellan et al., 1992); and (5) were able to provide written informed consent to participate in the study. We used the following exclusion criteria: (1) a medical condition that would make participation medically hazardous; (2) an acute severe psychiatric condition in need of immediate treatment, or an imminent suicide risk; (3) required immediate medical attention related to physical dependence on substances (i.e., withdrawal); (4) unable to receive treatment due to geographic location; or (5) unable to provide informed consent. No clients from the study were excluded based on the aforementioned exclusionary criteria. The University of Massachusetts Medical School Institutional Review Board (IRB) approved this study, deeming it to be program evaluation rather than human subjects research.

CRIMINAL JUSTICE, BEHAVIORAL HEALTH, AND SUBSTANCE USE MEASURES

During study intake, clinicians conducted a comprehensive baseline assessment with all participants as a term of the SAMHSA grant that funded parts of this project. Self-report data for baseline characteristics were measured via SAMHSA Government Performance and Results Act Modernization Act of 2010 questions (Government Performance and Results Act Modernization Act of 2010, 2011), as well as other validated and reliable scales (i.e., ASI, BASIS-32, and PCL-C). The GPRAMA includes the following required data elements: client-planned services; demographics; military history if applicable; history of drug and alcohol use; living conditions; education, employment, and income; crime and criminal justice status; mental and physical health problems; and services received. The Addiction Severity Index (ASI) (McLellan et al., 1992) provided measures of demographics; criminal justice involvement; and quantity, frequency, and severity of substance use. Acute behavioral health symptoms were measured via the BASIS-32. The BASIS-32 assessed psychiatric symptoms among five subscales (i.e., relation to self and others, daily living and role functioning, depression and anxiety, impulsive and addictive behavior, and psychosis) using 32 items rated from 0 to 4, with 0 indicating no difficulty and 4 indicating extreme difficulty. This self-report measure is commonly used in mental health settings to identify problem areas to target in treatment planning and has demonstrated high reliability and validity (Eisen, Dill, & Grob, 1994). The Posttraumatic Disorder Checklist-Civilian version (PCL-C) is a self-report checklist of PTSD symptoms based closely on DSM-IV criteria that has demonstrated good psychometric properties (Eisen et al., 1994; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Ruggiero, Del Ben, Scotti, & Rabalais, 2003).

DATA ANALYSIS

To determine the treatment needs of the 73 participants enrolled in a rural Massachusetts DTC, we computed frequencies and descriptive analyses using SPSS Statistics 25. For gender comparisons, we computed independent sample T-Test/Mann Whitney-U Test for continuous variables, and Chi-Square Test of Independence for nominal variables.

Table 1. Participant Baseline Characteristics (N=73)

Characteristics	*n*	%	*M (SD)*
DEMOGRAPHICS & GENERAL INFORMATION			
Gender			
Male	42	57.5	
Female	31	42.5	
Age (Years)			34.38 (8.10)
Ethnicity			
Hispanic/Latino	3	4.1	
Non-Hispanic/Latino	70	95.1	
Race			
African American	5	6.8	
American Indian	2	2.8	
Caucasian	61	83.6	
Two or More Races	5	6.8	
Highest Level of Education (Lifetime)			
Less than High School Diploma/GED	24	32.9	
High School Diploma/GED	31	42.5	
Post-High School	18	24.6	
Employment			
Employed Full Time	27	37.0	
Employed Part Time	8	11.0	
Unemployed	38	52.0	
Housing			
Unstable Housing at Baseline	36	49.3	
Homelessness			
Years of Homelessness			2.93 (3.2)
Age when First Homeless			21.33 (7.0)
UTILIZATION OF HEALTH AND BEHAVIORAL HEALTH SERVICES			
Service Use (Past Month)			
Inpatient for Physical Complaint	3	4.1	
Outpatient for Physical Complaint	1	1.4	
Emergency Room for Physical Complaint	9	12.3	
Inpatient for Psychiatric Complaint	4	5.5	
Outpatient for Psychiatric Complaint	9	12.3	
Emergency room for Psychiatric Complaint	3	4.1	
Inpatient for Substance Abuse	11	15.1	
Outpatient for Substance Abuse	16	21.9	
Emergency Room for Substance Abuse	7	9.5	
CRIMINAL JUSTICE HISTORY			
Arrested at least one time	72	98.6	
Incarcerated for at least one month	70	95.9	
Lifetime arrests			13.93 (14.43)
Lifetime convictions			6.59 (9.11)
Lifetime months incarcerated			23.42 (37.05)
Most Common Types of Criminal Charges			
Parole/Probation violation	57	78.0	
Drug charges	72	76.8	
Burglary	44	60.3	
Assault	43	58.9	

Characteristics	*n*	%	*M (SD)*
MENTAL HEALTH			
Psychological/Emotional Problems (Past Month)			
Depression	33	45.2	
Anxiety	45	61.6	
Hallucinations	0	0	
Trouble understanding, concentrating, remembering	23	31.5	
Trouble controlling violent behavior	10	10	
Suicidal thoughts	1	1.4	
Suicidal attempts	0	0	
Psychological/Emotional Problems (Lifetime)			
Depression	50	68.5	
Anxiety	54	74.0	
Hallucinations	1	1.4	
Trouble understanding, concentrating, remembering	24	32.9	
Trouble controlling violent behavior	19	26.0	
Suicidal thoughts	6	8.2	
Suicidal attempts	5	6.84	
Trauma			
Experienced at least one traumatic event in lifetime	44	60.3	
Experienced Interpersonal Violence	38	52.0	
Experienced physical abuse	37	50.7	
Experienced sexual abuse	22	30.1	
Basis-32			
Relation to self & others			1.07 (.89)
Depression & anxiety			1.26 (.94)
Daily living & role functioning			1.1 (.81)
Impulsive/addictive behaviors			0.62 (.77)
Psychosis			0.21 (.47)
Total score			0.80 (.65)
SUBSTANCE USE HISTORY			
Most Common Drugs of Abuse (Past Month)			
Alcohol	7	15.1	
Cocaine/Crack	9	12.3	
Any illicit drug	22	30.1	
Marijuana	13	17.8	
Most Problematic Substances (Lifetime)			
Heroin	43	58.9	
Cocaine/Crack	7	9.6	
Alcohol	6	8.2	
Other Opioids	5	6.8	
Percocet	4	5.4	
Substance Use History (Lifetime)			
Years of Substance Use			
Marijuana			9.19 (9.12)
Alcohol			8.03 (8.85)
Heroin			6.19 (6.33)
Cocaine/Crack			4.19 (5.38)
Any illicit drug			12.55 (8.71)

RESULTS

BASELINE CHARACTERISTICS AND NEEDS

Demographics. Table 1 summarizes the demographics of individuals enrolled in the DTC. Of the 73 participants, 42 (57.5%) were males and 31 (42.5%) were females, a much higher proportion of females than other DTC literature indicates (Peters et al., 2012). Participants were predominantly Non-Hispanic or Latino (95.1%) and Caucasian (83.6%). Mean age of the sample was 34.38 (SD=8.1). Regarding marital status, 9.6% were married, 1.4% were widowed, 6.8% were divorced, and 82.2% never married. Sample demographics such as gender are similar to the population of this region. However, this DTC had a slightly higher proportion of Black/African Americans compared to the general population in this region (6.8% versus 2%) (Barnstable County Department of Human Services, 2010).

Criminal Justice Involvement Needs. As indicated in Table 1, and not unexpected given the DTC setting, participants had a significant history of criminal justice involvement and therefore substantial needs in this area. On average, participants had been arrested 13.9 times in their life; the average age of first arrest was 17.3 years. On average, participants spent at least 23.42 months incarcerated in their lifetime and 34.77 days incarcerated in the last 6 months.

Mental Health Needs. We examined a variety of mental health-related areas of potential need. On average the sample had modest acute behavioral health needs and an overall BASIS-32 score of .80 (SD=.65), the BASIS-32 subscales of depression and anxiety (1.26, SD=.94), daily living and role functioning (1.1, SD=.81), and relation to self and others (1.07, SD=.89), psychosis (.22, SD=.47), and impulsive and addictive behavior (.62, SD=.77)[2]. By contrast, a high proportion of participants also reported lifetime mental health symptomology: 74% anxiety; 68.5% depression; 32.9% trouble understanding, concentrating, and/or remembering; and 26% reported trouble controlling violent behavior. In addition, 60.3% of the sample reported experiencing at least one traumatic event in their lifetime (52% have experienced interpersonal violence, 50.7 % have experienced physical abuse, and 30.1% have experienced sexual abuse), and 6.84% reported prior suicide attempts in their lifetime.

Substance Use Needs. A high proportion of the sample reported opioids as their primary drug (71.1%, with 58.9% specifically attributable to heroin), followed by 9.6% crack/cocaine and 8.2% alcohol. A high proportion of the sample also reported polysubstance use (55%). On average participants have had 1.67 prior nonfatal overdoses in their lifetime. Participants reported using any illicit drug for an average of 12.55 years (SD=8.71) in their lifetime. Regarding lifetime use, marijuana was used for the longest amount of time (9.19 years, SD=9.12), followed by alcohol (8.03 years, SD=8.85), and heroin (6.19 years, SD=6.33). Regarding intravenous drug use (IDU), 37% of the sample reported IDU in the past six months, and 36% reported using a syringe/needle that someone else had used.

[2] Of note, despite observed extensive behavioral health histories, modest acute behavioral health symptoms (as measured by the BASIS-32) were reported, suggesting underreporting. Previous studies have also found similar patterns of underreporting of these symptoms on the BASIS-32 (Higgins & Purvis, 2002). Therefore, findings concerning acute behavioral health symptoms should be interpreted with some caution. This sample may have much higher acute behavioral health symptoms and needs than observed.

Physical Health Needs. Regarding physical health, 26% of DTC participants reported a current chronic medical problem and 23.3% reported taking a prescription for a physical ailment. Moreover, in the 30 days prior to study intake, 30% of participants reported experiencing medical problems, and 90.5% reported being bothered by these medical issues. 90.3% of the sample have been tested for HIV in their lifetime, and 1.6% had a positive result. Regarding Hepatitis C, 88.9% of the sample has been tested, and 44% had a positive result with a confirmatory test. Regarding dental care, 64.4% of the sample reported receiving no dental care in the past 6 months; 43.8% reported needing dental care.

Social and Support Needs. Approximately half of the sample reported unstable housing (49.3%) and 52% were unemployed at intake. On average, participants reported being homeless for a total of 2.9 years in their lifetime (SD=3.2) and were first homeless at 21.3 years of age (SD=7.0).

GENDER-DIFFERENCES AND NEEDS

Demographics. Demographics stratified by gender are presented in Table 2. Within the sample, 57.5% were male, and 42.5% were female. Male and female participants did not statistically differ in terms of age, ethnicity, race, or marital status.

Criminal Justice Needs by Gender. As in the full sample, and not unexpectedly given the DTC setting, both male and female participants had a significant history of criminal justice involvement. Differences in lifetime arrests were considered. Although not statistically significant, the means did differ between males and females; males had been arrested on average 15.07 times, as compared to 12.39 times on average for females ($p<0.12$, Cohen's $d=0.19$). However, on average, males were arrested at a younger age and did statistically differ as compared to females (15.5, 19.8, respectively, $p<.003$). Other statistically significant differences between males and females included: average number of convictions (7.95, as compared to 4.54 for females, $p<.025$, Cohen's $d=0.87$); the average number of months incarcerated (32.9 months for males, as compared to 10.58 for females ($p<.000$), Cohen's $d=0.63$); and most prevalent types of criminal charges (prior violations of probation or parole: 88.1% of males, 65.5% of females, $p<.013$, $\varphi= -.30$).

Mental Health Needs by Gender. Females disproportionately reported experiencing more traumatic events as compared to males, consistent with other DTC literature (Gray & Saum, 2005; Morse et al., 2014; Richman, Moore, Young, & Barrett, 2014; Wolf, Nochajski, & Farrell, 2015). On average, 77.4% females reported experiencing at least one traumatic event in their lifetime, as compared to 47.6% of males ($\varphi= .30$, $p<.014$). Females also disproportionately reported experiencing more interpersonal violence than males (77.4%, 33.3%, respectively, $\varphi=.44$, $p<.000$). In regard to sexual abuse, 48.4% of females reported experiencing sexual abuse in their lifetime, as compared to 16.7% of males ($\varphi= .33$, $p<.005$). Regarding mental health symptomology, although not statistically different, on average females reported more psychological problems in their lifetime as compared to males in regard to depression (74.2%, 64.3%, respectively), anxiety (80.60%, 69.0%, respectively), and suicidal thoughts (12.9%, 4.80%, respectively); whereas males on average reported more trouble controlling violent behavior as compared to females (33.3%, 16.1%, respectively).

Table 2. Baseline Characteristics Stratified by Gender (N=73, Males=42, Females=31)

Variable	Males (mean or %)	Females (mean or %)	t or Chi Square x^2	p value
DEMOGRAPHICS				
Age (Years)	34.47	34.32	582.0	0.44
Ethnicity				
Hispanic or Latino	2.40%	6.5%	0.75	0.386
Non-Hispanic or Latino	97.6%	93.5%	0.75	0.386
Race				
African American	9.5%	3.2%	1.1	0.292
American Indian	4.8%	0%	1.5	0.218
Caucasian	80.9%	87.1%	0.49	0.484
Two or more races	4.8%	9.7%	0.67	0.411
Education				
Less than High School	47.6 %	12.9 %	9.7	0.002*
High School Diploma/GED	38.0 %	48.4%	0.77	0.379
Post-High-School	14.3%	38.7%	5.7	0.017*
Employment				
Employed Full Time	47.6%	22.6%	4.798	0.028*
Employed Part Time	9.5%	12.9%	0.20	0.648
Unemployed	42.9%	64.5%	3.3	0.067
Housing				
Unstable Housing at Baseline	33.3%	70.9%	21.159	0.001*
Homelessness				
Years of Homelessness	3.40	2.19	198.0	0.17
Age when First Homeless	20.52	22.38	-0.901	0.37
HEALTH SERVICE UTILIZATION				
Service Utilization (Past Month)				
Inpatient for Physical Complaint	2.4%	6.5%	0.75	0.386
Outpatient for Physical Complaint	0	3.2%	1.3	0.241
Emergency Room for Physical Complaint	11.9%	12.9%	0.01	0.898
Inpatient for Psychiatric Complaint	4.8%	6.5%	0.09	0.754
Outpatient for Psychiatric complaint	4.8%	22.6%	5.2	0.022*
Emergency Room for Psychiatric Complaint	4.8%	3.2%	0.10	0.744
Inpatient for Substance Abuse	14.3%	16.1%	0.04	0.828
Outpatient for Substance Abuse	9.5%	38.7%	8.8	0.003*
Emergency Room for Substance Abuse	11.9%	6.5%	0.61	0.434
MENTAL HEALTH				
Psychological & Emotional Problems (Past Month)				
Depression	35.7%	58.1%	3.5	0.058
Anxiety	54.8%	70.0%	1.9	0.159
Hallucinations	0	0	0	N/A
Trouble understanding, concentrating, remembering	26.1%	38.7%	1.2	0.255
Trouble controlling violent behavior	16.6%	9.67%	0.73	0.391
Suicidal thoughts	2.4%	0	0.74	0.387
Suicide attempts	0	0	0	N/A
Psychological & Emotional Problems (Lifetime)				
Depression	64.3%	74.2%	0.97	0.324
Anxiety	69.0%	80.6%	0.92	0.336
Hallucinations	2.4%	0	0.76	0.381
Trouble understanding, concentrating, remembering	31.0%	35.5%	0.11	0.736
Trouble controlling violent behavior	33.3%	16.1%	2.7	0.100
Suicidal thoughts	4.8%	12.9%	1.4	0.222
Suicide attempts	7.1%	6.5%	0.11	0.916

Table 2. Cont. Baseline Characteristics Stratified by Gender (N=73, Males=42, Females=31)

Variable	Males (mean or %)	Females (mean or %)	t or Chi Square x^2	p value
Trauma				
At least one traumatic event in life	47.6%	77.4%	6.0	0.014*
Experienced physical abuse	40.5%	64.5%	4.2	0.118
Experienced sexual abuse	16.7%	48.4%	7.7	0.005*
Experienced interpersonal violence	33.3%	77.4%	13.9	0.000*
BASIS 32-Scores				
Relation to self and others	0.95	1.10	581.0	0.432
Depression and anxiety	1.15	1.44	503.0	0.191
Daily living and role functioning	0.96	1.35	476.5	0.105
Impulsive and addictive behaviors	0.56	0.67	607.5	0.621
Psychosis	0.13	0.33	526.5	0.091
Total	0.75	0.90	493.0	0.290
SUBSTANCE USE HISTORY				
Primary Drug of Use (Past Month)				
Marijuana	19.0%	16.1%	0.10	0.747
Alcohol	16.7%	12.9%	0.19	0.657
Heroin	11.9%	16.1%	0.26	0.604
Cocaine/Crack	11.9%	12.9%	0.01	0.898
Any illicit drug	30.1%	29%	0.03	0.860
Most Problematic Substances (Lifetime)				
Heroin	59.5%	58.1%	0.01	0.900
Cocaine/Crack	7.1%	12.9%	0.68	0.409
Alcohol	7.1%	9.7%	0.15	0.697
Other Opioids	9.5%	3.2%	1.1	0.292
Percocet	2.4%	9.7%	1.8	0.176
Marijuana	7.1%	0	2.3	0.129
Years of Substance Use				
Marijuana	10.62	7.23	492.0	0.072
Alcohol	9.86	5.55	414.5	0.039
Heroin	6.62	5.61	539.5	0.210
Cocaine/Crack	4.52	3.74	636.0	0.868
Any illicit drug	13.05	11.87	0.568	0.572

*$p < 0.05$

Substance Use Needs by Gender. Males reported a longer history of alcohol use as compared to females; on average, males reported using alcohol for 9.86 years of use in their lifetime, whereas females reported using alcohol for 5.55 years in their lifetime (Cohen's d=0.5, p<0.039). Other lifetime and past-six-month drug use preferences and patterns did not differ by gender. However, regarding IDU, although not statistically significant, females disproportionately reported more IDU within the past six months (48.4%) as compared to males (28.6%). However, males disproportionately reported using shared needles/syringes in the past six months as compared to females (50%, 26.7%, respectively, φ=.27, p< .022).

Physical Health Needs by Gender. Regarding physical health, females reported chronic medical conditions at a higher rate than males (38.7%, 16.7%, respectively, $\chi 2=4.501$, φ=.25, p<.034). Females also reported taking prescription medication for a physical problem more often than males (38.7%, 11.9%, respectively, $\chi 2=7.173$, φ=.31, p<.007). Moreover, in the 30 days prior to study intake, female participants experienced more medical problems as compared to males (U=474, p<.015, and $\eta 2=.08$ indicating a medium-large effect size). Although 64.4% of the sample reported needing dental care, males disproportionately reported receiving less dental care in the past six months as compared to females (23.8%, 51.6%, respectively, $\chi 2=6.013$, φ=.29, p<.014). Regarding Hepatitis C, 44% of the study sample had a positive result with a confirmatory test, and there was no difference between genders.

Social and Support Needs. At intake, a higher proportion of females reported having unstable housing in the past 30 days (77.9%) compared to males (33.3%, $\chi 2=21.159$, φ=.44, p<.001). Females had more education after high school as compared to males (38.7%, 14.3%, respectively, $\chi 2=5.7$, φ=.28, p<.017), yet males had more full-time employment (47.6%, 22.6%, respectively, $\chi 2=4.798$, φ=.26, p<0.028) as compared to females.

DISCUSSION

To better understand the treatment needs and gender differences of rural DTC participants with CODs, we analyzed sample characteristics collected at intake. This study observed that rural DTC clients had extensive criminal justice involvement (e.g. high number of lifetime arrests and convictions); high rates of opioid use disorder (OUD); lifetime mental health symptomology (e.g. anxiety, depression, and trauma); high rates of Hepatitis C; and other psychosocial needs, such as housing and employment. This study also identified important gender differences. Compared with their male counterparts, females evidenced more lifetime mental health symptoms, IDU, chronic medical conditions, and unstable housing. Conversely, men had more extensive criminal justice involvement (e.g. arrests and convictions), trouble controlling violent behavior, more needle sharing, longer history of alcohol use, and more dental care needs. Although the needs identified by this study do not drastically differ from other literature highlighting needs of people in the criminal justice system (e.g. women with trauma histories, psychosocial, and medical needs) (Mahmood et al., 2013; Morse et al., 2014; Finlay et al., 2015; Datchi & Ancis, 2017; Shannon et al., 2018; Singh et al., 2018), the findings from this study suggest important clinical implications for rural DTCs and community treatment providers, as well as several gender-specific recommendations. This is important as rural areas often struggle with DTC understaffing and often lack access to evidence-based care in the community (Edmond, Bond, Aletraris, and Roman, 2015; Pullen & Oser, 2014; Borders & Booth, 2007). Further, given the often-limited community resources in rural settings, it may be critical for ongoing evaluation to determine if DTCs are meeting the myriad of needs of participants and whether any modifications are needed.

DTC participants in this study presented with extensive criminal justice histories, which is highly correlated with an elevated risk of recidivism (US Sentencing Commission, 2017). To address DTC participant's high risk for recidivism, DTCs should consistently use RNR principles and provide ongoing evidence-based risk needs assessment monitoring such as the Level of Service Inventory-Revised (LSI-R) in order to evaluate changes in risk factors and needs related to recidivism to drive treatment planning (Serin & Lowenkamp, 2015; Andrews & Bonta, 2017). Unfortunately, despite significant advances in the development of effective risk assessment tools in recent years, research has highlighted inadequacies in the implementation of a service delivery process that uses risk assessments such as the LSI-R (i.e., up-to-date assessments) and links risk needs assessment to referrals and placement across CJ settings to better address recidivism (Taxman, Thanner, & Weisburd, 2006; Taxman, Cropsey, Young, & Wexler, 2007; Salisbury, Boppre, & Kelly, 2016). Literature indicates that CJ settings still struggle to use these assessments accurately and consistently to inform collaborative case planning (Taxman et al., 2006, Taxman et al., 2007; Salisbury et al., 2016). For example, these assessments should be used at multiple decision points to direct the supervision intensity, case planning and management, programming requirements, and treatment referrals. In this particular DTC, assessments were sometimes conducted prior to the participant's enrollment in the court (e.g. several months prior to intake), and only once during the participant's involvement in DTC. In addition, many DTC programs still struggle to develop and implement collaborative case plans that assist their participants in both reducing their recidivism risk and advancing their recovery. Our findings suggest a continued need for collaborative and comprehensive case planning that integrates behavioral health, criminogenic risk, psychosocial assessments, and ongoing collaborative reviews of case plans between clients and behavioral health, medical, and criminal justice providers.

Compared with their male counterparts, females evidenced more lifetime mental health symptoms, IDU, chronic medical conditions, and unstable housing. Conversely, men had more extensive criminal justice involvement (e.g. arrests and convictions), trouble controlling violent behavior, more needle sharing, longer history of alcohol use, and more dental care needs.

This study also identified a significant need for infectious disease screening and medical care in DTCs. Given the high proportion of participants who reported chronic medical conditions, other physical ailments, and tested positive for Hepatitis C, DTCs in rural locations can benefit from close collaboration with a medical provider or a dedicated nurse who could provide integrated medical care (Galambos, 2005). Psychoeducation regarding safe needle practices and linkages to local needle exchanges can also help reduce the high rate of needle sharing among IDU and contraction of blood borne illnesses. Additionally, 64.4% of DTC participants did not receive dental care during the past six months, although 43.8% reported needing dental care. Consistent with the identified need

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for dental care in this study, research has indicated a disproportionate amount of oral health problems among individuals who are chronically homeless and use substances (Rosenheck & Lam, 1997). Therefore, it is critical to provide linkages to dental care for DTC participants to prevent periodontal disease.

Lastly, about half the study sample reported unstable housing and unemployment at intake. Unfortunately, many rural communities lack the necessary infrastructure to meet the needs of people experiencing homelessness, and have poor economic structures with a lack of employment opportunities (Arthur, 1991; Rephann, 1999; Donnermeyer, Jobes, & Barclay, 2006). For example, compared with urban and suburban communities, rural communities tend to have less access to shelters and supportive services, including employment services and often fewer employment opportunities (Rural Health Information Hub, 2016). Therefore, targeted efforts around housing and employment, such as case management, supportive housing, and/or supported employment services, are critical components to providing necessary supports to these DTC participants, so they are able to focus on their path to recovery.

In regard to gender differences, females disproportionately experienced more lifetime trauma, unemployment, and unstable housing. These findings are consistent with previous research in non-DTC settings that identified the complexity of women's needs within the CJ system and support the need for gender-responsive treatment (Messina, Calhoun, & Warda, 2012). Research has shown that, compared with men, trauma is a distinct criminogenic risk factor for women, putting them at risk for reoffending (Boppre & Salisbury, 2016). Gender-responsive treatment programs address the unique needs of women and have been found to have a positive effect on significant outcomes, such as treatment retention, completion and post treatment abstinence (Saxena, Messina, & Grella, 2014). Findings from this study suggest two implications for female specific treatment needs in DTC settings.

First, given the high rates of observed trauma among females in this study, DTCs should consider assessment related to trauma. Unfortunately, criminogenic risk and need assessments routinely used in most DTCs are still designed for male participants. To better meet the unique criminogenic risk and needs of female participants, DTCs should integrate gender responsive criminogenic risk and needs assessments, such as the Women's Risk Needs Assessment (WRNA) instrument. These types of gender-specific RNR assessments can be helpful in assessing women's specific criminogenic needs and developing a comprehensive treatment plan designed to guide trauma-responsive treatment and supervision matched to women's needs. Additionally, clinicians can use validated trauma assessments, such as the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) (Weathers et al., 2018). Second, studies confirm that

it may be more difficult for women in the criminal justice system to overcome many complex challenges to obtain and maintain employment and stable housing (Covington, 2003; Flower, 2010). To increase the likelihood that women will obtain and maintain long-term employment and housing, DTCs should provide access to (1) supported employment and supportive housing programs skilled in working with women, (2) opportunities to engage in a gender-responsive strategies for treatment and case management services, and (3) assistance in applying for needed benefits and entitlements such as childcare assistance.

In regard to male findings, consistent with established non-DTC research, men had more extensive CJ histories (e.g. arrests and convictions), reported a higher difficulty in controlling violent behavior, engaged in more risk-taking behaviors such as needle sharing, and reported more lifetime alcohol use (Substance Abuse and Mental Health Services Administration, 2013). Findings from this study suggest three implications for male-specific treatment needs in DTC settings. First, men had more extensive CJ histories, which place them at high risk for recidivism. As aforementioned, RNR assessment and linkages to evidence-based intervention matching identified needs is warranted to adequately address criminogenic risk and need. It should be noted that there is growing support for integrating a gender-responsive lens and approach for men as well. For example, maladaptive male identity and masculinity in men has been found to be a critical dynamic factor to consider as it impacts all elements of the treatment process, including treatment engagement and in turn potentially court completion (Blagden, 2018; Substance Abuse and Mental Health Services Administration, 2013).

Given the high rates of men who report trouble controlling violent behavior, as well as its correlation to masculinity, relapse, and recidivism in other studies, male offenders should be linked to programming that integrates an understanding of how masculine roles may affect criminal involvement and relapse, initiation, and engagement in behavioral health treatment (Feder, Levant, & Dean, 2007; Hakansson & Berglund, 2012; Meijers, Harte, Meynen, & Cuijpers, 2017; Mannerfelt & Hakansson, 2018). In addition, linking male participants to targeted services that integrate problem-solving, decision-making, conflict resolution, impulsivity, and anger management skills to help participants better manage conflicts without violence. Specifically, evidence-based cognitive behavior interventions have been found to be effective in enhancing ability to control violent behavior (Jewkes, Flood, & Lang, 2015; Substance Abuse and Mental Health Services Administration, 2013). Additionally, men reported more needle sharing as compared to women. This risk-taking behavior is also linked to aforementioned maladaptive male identity and masculinity (Umbach, Raine, & Leonard, 2018). Sharing needles puts these men at greater risk not only for viral hepatitis but for other serious health problems, like skin infections, HIV, heart infections, and abscesses. Typically, hepatitis and infectious disease prevention is not among the ancillary services typically provided by drug courts (Blagden, 2018). Given the high rates of reported needle sharing, which can increase risk for contracting Hepatitis C and other infectious diseases, these findings suggest that rural DTCs should consider linking participants to infectious disease prevention programming that integrates psychoeducation regarding safe needle use.

Lastly, men in this study reported more lifetime alcohol use compared to women. Male participants in rural DTC may benefit from linkages to medication assisted treatment (MAT) for the treatment of alcohol use disorders (AUD): naltrexone, disulfiram, and acamprosate. Unlike MAT for OUD, these medications can be prescribed by physicians in any practice setting without special licensing. Therefore, there should be less obstacles encountered in linking to MAT for AUD than those found in linking to MAT for OUD in rural communities. In addition

to formal AUD treatment, male participants may also benefit from linkages to self-help recovery groups such as Alcoholics Anonymous and SMART recovery. Additionally, given the high prevalence of OUD in this sample, linkage and access to MAT for OUD is critical. Given the obstacles related to licensing MAT providers for OUD, the Bureau of Justice Assistance (BJA) encourages DTCs to link participants to American Society of Addiction Medicine (ASAM) certified physicians/MAT providers. To increase MAT capacity rural communities, telemedicine can help local providers facilitate patient initiation and engagement by fostering collaborations with these ASAM certified physicians/MAT providers (Peyton & Gossweiler, 2001; Priester et al., 2016). Additionally, using mobile opioid recovery units and increasing access to Narcan/naloxone are critical for rural communities to combat the opioid epidemic.

Limitations

Several limitations need to be acknowledged and could be addressed in future research. First, this rural study only included one DTC without an urban comparison. Second, this pilot study only involved one rural DTC in one state; therefore, the findings may not be representative of other courts in Massachusetts or other rural DTCs in other parts of the country. Third, the data presented were collected as part of a standardized self-report assessment; we did not have access to other data sources, such as objective collateral information on substance use or measures of PTSD symptoms and type of traumatic event experienced. Fourth, and related, although we collected self-report data on criminal justice involvement, we did not use data from the Massachusetts Department of Corrections to verify data on incarcerations, arrests, and convictions. Fifth, during project planning and IRB submissions, the DSM-5 was not in circulation; therefore DSM-IV-TR (American Psychiatric Association, 2000) criteria were used to determine participants' eligibility to participate in the study, and for consistency, these criteria were used for the duration of the study. Future research should evaluate whether having clinicians working alongside DTCs can improve such engagement overtime. Lastly, there are limitations to data gathered to explore other factors that may involve gender, such as details regarding domestic violence and parental stress.

CONCLUSION

This study highlights the unique treatment needs and gender differences of participants in a rural Massachusetts DTC. The results from this study suggest the need for a gender-responsive considerations of rural DTC populations. Although the notion of gender-responsive interventions is not novel and is in fact considered best practice for all treatment courts, limited research in this area continues to show that gender-responsive care is not consistently happening. In fact, a recent study in 2018 (Gallagher, Nordberg, & Gallagher, 2018) garnered that female participants felt that they were not receiving effective, gender-responsive treatment for their substance use disorders, which was a barrier to them graduating DTC. More research is needed to track the implementation of these best practices. Additionally, while there is often limited access to treatment, and particularly gender-specific treatments in rural areas, this data suggest that particular needs are critical to address in these communities and by gender. Moreover, others have begun to integrate comprehensive and specialized treatments within DTCs in order to better meet the needs of the participants (Kushner, Peters, & Cooper, 2014). These treatments should include comprehensive assessment across domains, criminogenic risk, and needs-informed service linkage; gender-responsive and evidence-based treatment and supports, such as Cognitive-Processing Therapy (CPT) for trauma and childcare supports for women; linkages to medical and dental care; and supportive housing and employment services. This work is an important first step to begin tailoring services to participants in rural DTCs.

In particular, services should be tailored to address the pathways to offending. In addition, gender-responsive wraparound supports such as childcare are critical considerations to integrate into any vocational and housing supports for women in order to appropriately address the employment and housing gender disparity in this population. Lastly, although historically, standard behavioral health and CJ services have been designed with male clients in mind, services in these systems need to integrate more "male-specific" approaches to better engage and treat men. Growing research points to a need for systems and providers to increase their awareness of the impact of male gender roles on men's mental health, substance use, criminal justice involvement, and help-seeking behaviors.

Future research efforts that include a larger sample with a comparison group in a nonrural (i.e., urban/suburban) community are needed to further understand and evaluate unique needs of women and men in rural drug courts with COD and to effectively develop and implement and evaluate these tailored treatment services. Additionally, more research is needed regarding how to effectively integrate wraparound and treatment services for participants with COD and high treatment needs in DTCs in rural areas (Wolff et al., 2013). Ensuring that the unique needs of DTC participants are met will provide greater opportunities for participants to complete court programming, a lower risk of criminal recidivism, and a more successful path to recovery.

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IN THEIR OWN WORDS: SUPPORTS AND BARRIERS TO RECOVERY FOR PARTICIPANTS IN TWO NEIGHBORING DRUG COURTS

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VALUE STATEMENT

This study identified what drug court participants reported as their major extrinsic and intrinsic barriers and facilitators to recovery, as well as their strengths and supports in recovery. Major findings include differences between rural and urban settings and the need for wraparound care, including housing and employment assistance, which have implications for drug court team members and treatment professionals. This study is the first published report of drug court participants' perspectives; findings illustrate the role that rural health disparities, including untreated psychological illness and a lack of transportation, play in the recovery process.

ABSTRACT

Although research exists on the many benefits and successes of drug court, few published studies describe the experience from a drug court participant's perspective. The focus of this study was to determine what drug court participants reported as their primary barriers and supports to recovery and how the drug court experience could better support recovery in both rural and urban settings. Phase-Up and Graduation forms covering 27 months were collected from the records of a rural drug court and a neighboring urban drug court. A total of 58 forms from a rural drug court and 68 from an urban drug court were collected and de-identified. Using a mixed-methods approach that incorporated a Consensual Qualitative Research process, coders identified 1340 references to the 10 domain themes among the 126 forms. This study identified what drug court participants reported as their major extrinsic and intrinsic barriers and facilitators to recovery. Major findings include the need for wraparound care, including housing and employment assistance. Findings illustrate the role that health disparities, including untreated psychological illness and a lack of transportation, play in the recovery process.

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Drug court, rural, consensual qualitative research, supports, recovery

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INTRODUCTION
Drug courts were established in 1989 to channel certain substance-using offenders towards treatment rather than standard sentences of incarceration and probation (Sevigny, Pollack, & Reuter, 2013). Since 1989, extensive research has sought to understand the costs and efficacy of these courts. Years of drug court program results have demonstrated decreased rates of crime and substance use among participants, at much lower costs than traditional law enforcement methods (National Association of Drug Court Professionals [NADCP], 2018a). While the NADCP has developed best practice standards for adult drug courts (NADCP, 2018a), drug courts are generally localized courts that tailor programming to the region and participants they serve, making it challenging to study courts across jurisdictions.

Although published research addresses the benefits of drug court and the key components that make drug court successful (Carey, Mackin, & Finigan, 2012; Gutierrez & Bourgon, 2012; Downey & Roman, 2010; Marlowe, 2012), few published studies describe the drug court experience from a participant's perspective. Highlighting the experiences of drug court from the perspective of the participants allows for a more thorough evaluation and deeper contextualization of its effectiveness (Boyd, Murray, SNAP, & MacPherson, 2017; Boyd & NAOMI Patients Association, 2013; Morse et al., 2014).

BARRIERS TO RECOVERY
A report by Lucenko, Henzel, Black, Mayfield, and Felver (2014) assessed the efficacy of Recovery Support Services (RSS) when provided to drug court participants. The goal of RSS was to assist participants with basic needs such as food and clothing, as well as finding work, training, and transportation. These were all considered "major barriers to success" (p. 2). The report found that participants who did not specifically receive aid from RSS spent more days in treatment, were less likely to be employed in the year following drug court, and had higher rates of arrest. Focus groups conducted with female drug court participants identified criminal justice involvement as a barrier to healthcare, employment, and housing (Morse, Silverstein, Thomas, Bedell, & Cerulli, 2015).

The NADCP and the Drug Court Standards Committee, in their published report "Defining Drug Courts: The Key Components" (1997), asserted the fundamental need to address co-occurring issues, such as mental and physical health, homelessness, unemployment, and a lack of education in the drug court treatment process. They also identified insufficient job preparation, family issues, domestic violence, and past trauma as barriers to recovery. Additional research has revealed the prevalence of mental health issues among drug court participants. In Adult Drug Court Best Practice Standards: Volume II Text Revision (NADCP, 2018b), the NADCP states, "Approximately two-thirds of drug court participants report serious mental health symptoms and roughly one-quarter have a diagnosed Axis I psychiatric disorder, most commonly major depression, bipolar disorder, PTSD, or other anxiety

disorder" (p.12). Evidence suggests that providing medical or dental treatment can improve outcomes for some drug court participants. One study concluded that providing healthcare to participants can lead to 50% greater reductions in recidivism and providing dental care can lead to a 59% reduction in recidivism compared with programs that do not offer these services (Carey et al., 2012).

Although relationships within drug court can have benefits for participants, a qualitative study of Pennsylvania Drug Court participants conducted by Kuehn and Ridener (2016) identified the negative impact that social relationships can also have within the program. Negative social relationships often lead to stress among participants, creating drama in the program. They also noted that communication with other participants who are not dedicated to recovery or the program can slow the recovery process. Another barrier identified was ineffective treatment providers and programs, which is reflected by sentiments from participants in the study: "...IOP [Intensive Outpatient Treatment]. Not everyone in there stays clean. There is a lot of drug use"; "Outpatient [because] counselor couldn't control group"; "People are still getting high there. They are just there [IOP] to please people. Not to get better" (pp.2257–8).

Kuehn and Ridener also identified other drug court weaknesses, such as program requirements that limit the participants' ability to work and find a job. Some notable thoughts from participants included that the requirements for reporting to court and probation interfered with work schedules and job requirements, while also making it difficult to maintain full time work. The authors noted this as an "understandable" frustration, asserting the importance of employment for drug court participants' success and recovery. (Kuehn & Ridener, 2016, p.2258). Previous drug court research predicts worse outcomes for drug courts in which a significant portion of the population is lacking in education achievement and significant work histories (NADCP, 2018b). Furthermore, research has shown that drug courts that do not require participants to have a job or enroll in an educational program are less cost-effective than those that do not (Carey et al., 2012).

SUPPORTS IN RECOVERY

Incentives and sanctions have been recognized as meaningful components of a drug court (Wolfe et al., 2004). Wolfe and colleagues (2004) identified the desire to avoid conviction and/or incarceration as a major motivating factor of drug court. The use of sanctions along with incentives is helpful in holding participants accountable for their behaviors and decisions. The drug court graduation ceremony is a strong incentive for participants due to public recognition of the participant's success in overcoming the challenges of addiction.

Drug court itself can also act as a support by individualizing interventions to address the complex constellation of causes underlying substance use disorders and in so doing provides "wraparound" care (NADCP and Drug Court Standards Committee, 1997). The NADCP and Drug Court Standards Committee (1997) approaches participants with the idea of providing holistic treatment, which can include mental health services and primary care (NADCP and Drug Court Standards Committee, 1997). As part of these services, participants begin engaging in cognitive-behavioral therapies when they are medically stable to help establish communication, reduce conflict, and retrain patterns of behavior and associations with individuals and situations that might serve as triggers (NADCP, 2015). Seeing to criminogenic needs through interventions such as teaching participants decision-making skills has reportedly produced positive results (NADCP, 2018b).

Furthermore, a qualitative study among a group of Pennsylvania Drug Court participants by Kuehn and Ridener (2016) demonstrated the importance of structure, accountability, and the need to focus on achievements and successes rather than punishments and failure (Kuehn & Ridener, 2016). Participants also credited the value of drug court team members as contributing to their personal wellbeing in the program (Kuehn & Ridener, 2016).

Relationships with team members were important to the participants in overcoming their substance abuse disorders, as was the creation of new friendships and distancing themselves from old and potentially harmful relationships. One participant from the study stated, "My friends today are sober people and are supporting me." When discussing social support, the majority of the participants identified friends as those in recovery who they had met through drug court, Narcotics Anonymous (NA), Alcoholics Anonymous (AA), or other treatment programs (Kuehn & Ridener, 2016). A study by Gossop, Stewart, and Marsden (2007) also showed the significance of AA and NA meetings in abstinence-based recovery, where they found that those who frequently attended meetings were more likely to be abstinent from alcohol and opiates.

Another notable support is the incorporation of cultural-specific practices into addiction treatment for Indigenous populations. A study by Rowan et al. (2014) sought to explore the specifics of melded cultural practices to substance use recovery services and the outcomes of these contributions. Sweat lodges were the most frequently noted cultural practice in this study, but Rowan et al. also identified 16 other pertinent practices. Results from applications of cultural interventions in this study showed reported benefits in physical wellness and spiritual health, concluding that these interventions are broadly helpful for wellbeing when incorporated in substance use treatment for indigenous people. This is pertinent to our study, as a prominent Tribal Nation had a considerable influence on our rural drug court participants.

RURAL AND URBAN DIFFERENCES

Taking into consideration rural and urban differences is crucial when assessing drug courts. Drug courts are localized courts and are unique to the area they serve, which presents a challenge when studying courts across jurisdictions. While the general guidelines for drug courts are transferable, the methods, structures, and procedures can vary greatly depending on the region (King & Pasquarella, 2009). Only a paucity of research has explored differences between rural and urban drug courts, one study finding that rural drug courts tend to have lower funding and a smaller range of adjunct services than drug courts in urban settings (Bouffard & Smith, 2005). However, there are currently no studies investigating how differences in these two drug court settings affect the participants' subjective experiences. Although there is a lack of research comparing rural and urban drug courts, published studies have focused on

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more general rural/urban differences in substance use and treatment. A study conducted by Warner and Leukefeld (2001) found critical distinctions regarding substance use among rural and urban populations of incarcerated drug arrestees. Pertinent findings include fewer rural participants having attended substance use treatment despite having higher rates of long-term drug use compared to urban participants (Warner & Leukefeld, 2001). Another study found that rural veterans had higher rates of intravenous drug use and outpatient admissions, whereas urban veterans had more inpatient admissions. The authors suggest this is likely due to a lack of inpatient beds in the rural environment, indicating differing access to resources between rural and urban settings (Turvey, Lund, & Jones, 2019). This is a particularly relevant finding given that substance-abusing mothers in rural communities have lower completion rates of outpatient treatment (Shaw et al., 2015).

Pullen and Oser (2014) examined barriers to providing substance use treatment for rural and urban populations from the viewpoints of counselors. Meeting housing needs was a unique challenge presented by rural counselors, along with additional challenges that included getting their clients access to basic dental and medical services. Pullen and Oser grouped these under a larger theme of "Lack of Interagency Collaboration" (p. 9), which was identified as a problem by both rural and urban participants. In addition, while results showed that a lack of funding was a barrier for both groups, urban counselors expressed that it was an issue due to the heterogeneity and large numbers of their populations, while rural participants felt their insufficient funding translated to inadequate facilities. Urban counselors expressed sentiments that spoke to the strain of providing treatment to many clients with insufficient resources for large caseloads. Transportation was also a barrier expressed by both groups, but study results showed that rural areas have more significant challenges around transportation. The authors concluded that their data showed unique rural challenges due to "community and cultural factors" (p. 14) and environments where counselors are faced with fewer resources and less favorable environments to support recovery.

RESEARCH GAPS

The goal of this participant-focused study of barriers and supports is to provide data pertinent to supplement existing evidence-based practices regarding services and supports for drug court participants. This kind of study will provide a nuanced and detailed understanding of the drug court experience from the participants, in their own words. The differences in localized drug court policies have been a challenge to conducting drug court research. Local differences can be crucial to understanding the different needs, supports, and barriers for a geographic location (King & Pasquarella, 2009).

While extensive research demonstrates drug court effectiveness and decreased rates of criminal recidivism (Marlowe, 2011), there is a lack of research examining barriers and supports in recovery from the participant perspective. In addition, there is a lack of research focused on barriers and supports for drug court participants that span a broad scope of recovery, and not just that of drug court processes. Assessments of barriers and supports from the perspective of the drug court participant would provide valuable data for improving systems and lead to increased rates of success; while evaluating the differences between rural and urban participants would help to understand their specific needs and highlight the areas of necessary expansion and improvement in the drug court system.

As one study has suggested, rural treatment is specifically challenged by cultural and community components through an assessment of rural and urban substance abuse counselors (Pullen & Oser, 2014). There is a lack of

research focused on whether these, as well as urban challenges, are noted and addressed in a drug court system. Being able to adapt programs to address these needs for both rural and urban populations would produce better outcomes and success rates for participants in both settings. Furthermore, there is a need to assess rural and urban populations within a single drug court system to understand the unique challenges that are presented to each demographic and further understand if these needs are being met by the drug court system.

Our study involved the quantitative and qualitative analysis of Phase-Up and Graduation forms for two neighboring drug courts, one serving a predominantly rural population and the other serving a predominantly urban population. The focus of this study was to determine what drug court participants believed to be their primary supports in recovery and most significant barriers to recovery. A secondary aim was to assess the differences in barriers and supports between rural and urban areas to determine how the drug court experience can better support recovery in the two studied geographic regions.

METHODS

THEORETICAL MODEL

The current study utilized the Socioecological Model (SEM) in order to identify influential agents (behavioral or structural aspects) of drug court that contribute to health advocacy efforts. SEM is a framework for understanding behavior through often complex and interactional personal and environmental factors; it is used to help identify influential behavioral or structural agents in health advocacy within an organization. A UNICEF document (n.d.) states, "There are five nested, hierarchical levels of the SEM: Individual, interpersonal, community, organizational, and policy/enabling environment." Interventions can be taken at all levels of this model—supporting the individual in their interactions with others, their community, the systems surrounding them—to affect public health change/prevention. UNICEF further notes that "the most effective approach to public health prevention and control uses a combination of interventions at all levels of the model" (UNICEF, n.d., p. 1). SEM is pertinent to this study as we assess supports and barriers for those in recovery through the lens of geographical demographics, as well as other personal, and environmental factors. Much of the data from the current study fall under the guided segmentation of themes denoted by SEM levels.

DRUG COURT PARTICIPANT PROGRESSION

As participants progress through the drug court program, they "phase up" to various levels and gain privileges including fewer court visits, later curfews, more freedoms, and less supervision. Each drug court participant fills out a Phase-Up form when they would like to move to the next level of drug court and a Graduation form when they are ready to graduate. The Phase-Up forms consist of a combination of questions and check boxes for the requirements of the next level. Phase-Up forms also ask the participant to thoughtfully answer a series of questions that relate to their treatment and recovery journey. Completing these forms affords drug court participants opportunities to reflect upon their goals, to articulate what they are doing to maintain their sobriety, and to communicate their needs to the drug court team. The drug court team then determines whether the participant has demonstrated that he or she is prepared to move to the next phase or to graduate.

DATA AND SAMPLE

Phase-Up and Graduation forms were collected from the records of drug court coordinators for 27-month periods:

from February 2015 through May 2017 for the rural drug court, and from April 2015 through July 2017 for the urban drug court. A total of 58 Phase-Up and Graduation forms from the rural drug court and 68 Phase-Up and Graduation forms from the urban drug court were collected. All data were de-identified prior to this study, which was determined to be "not human subjects research" by the University of Minnesota Institutional Review Board. Phase-Up and Graduation forms had a set of defined questions, but participants had the ability to enter their own text and could free-write outside of the predefined questions as needed. These forms used in the two neighboring courts studied were very similar but not identical; while questions still focused on treatment and recovery, some of the questions had been adapted slightly for each court. Drug court participants were given the discretion to provide answers that were as detailed or as succinct as they preferred.

DATA ANALYSIS

Data were analyzed using a mixed methods approach. The Fisher Exact Test was employed for quantitative comparisons between rural and urban drug court participants, while a consensual qualitative research (CQR) approach was used for qualitative evaluation of the data. An alpha level of 0.05 was selected as the a priori criterion to indicate statistical significance. The CQR method is unique in that it involves multiple researchers coming to consensus on codes in a systematic way (Hill et al., 2005). Qualitative data were gathered in an open-ended manner, studying relatively small samples of each Phase Up and Graduation form individually with intention and detail, as is characteristic of CQR methods. This method is inductive, where conclusions are drawn from the data without challenging a pre-existing theory. A small team of researchers was used to analyze and determine conclusions based on the data, which were then examined for missed information (Hill et al., 2005).

Using the principles of CQR, five coders reached consensus among domains and categories based on the research question and study aims. The coding process was overseen by a faculty member and drug court team member with prior experience in CQR who served as an auditor; coders included an attorney who had previously worked on a participating drug court team, three coders who were professional students with an interest in drug court, and one coder who was an undergraduate student with experience in drug court. The coders did not have previous experience with Consensual Qualitative Research but studied the method before initiation of the research project.

The CQR process started with holistic coding in the first round of Phase-Up and Graduation form evaluation to identify themes in sections of text. Initial domain themes were independently identified for segments of raw data using a holistic coding process. Larger segments of data such as those included in essays, were coded as a whole instead of coding line by line to address the research questions (Dey, 1993). These research questions were: (1) what are participants' primary supports in, and barriers to, recovery? and (2) how can the drug court experience better support recovery in both rural and urban settings?

Domain names were cross-analyzed and used as the first iteration list for the next step in code mapping (Saldana, 2013). Descriptions of domain themes were created and coding subdivisions were identified for the second round of coding to better accommodate the different writing styles of drug court participants. In second-cycle coding, themes became more descriptive and codes were identified in a line-by-line fashion. This descriptive coding process allowed for the organization of domains around the study aims. During the second team meeting, consensus was reached; the coders discussed what codes could be combined, noting that some domains were not well represented in the

final table. The five coders discussed how the research domains might fit into the SEM. The coders identified 1362 references to the 10 domain themes after review of 126 forms, some of which included essays.

RESULTS

Because each form was de-identified before analysis to ensure anonymity, an exact demographic breakdown of study participants is not possible. Approximately half of the participants in each court were female and half male as identified by their Phase-Up forms. In the rural drug court, about half of the participants identified as Native American and the other half as Caucasian, while approximately 10% of the participants in the urban drug court identified as Native American with the other 90% identifying as Caucasian. Self-reported barriers to recovery were separated into extrinsic and intrinsic barrier domains, and the self-reported supports in recovery were separated into domains that categorized the type of support mentioned. Table 1 presents the coding of Phase-Up forms and Graduation forms, which is organized by the "mentions" of domains discussed and number of references to each domain ("frequency"). Table 1 also includes a theme description and breakdown of references to the theme in the rural versus urban drug courts using heat mapping to aid in visualization. Many reflections discussed multiple themes, and heat mapping was used to assist in visual comparison of domains and differences between the rural and urban drug court. There were 665 identified barriers and supports for the rural drug court and 675 identified for the urban drug court.

BARRIERS TO RECOVERY

Participants in both drug courts reported that they struggled to find housing to support their basic needs. Participants in both of the sites studied reported that additional support from the drug court team in obtaining housing would have been helpful to them.

In addition, participants in the two drug courts studied reported having significant struggles obtaining employment, given their criminal history and their limited work history. Financial debt was the most commonly mentioned extrinsic barrier for both groups. It was mentioned 13 times (22.4% of forms) in rural drug court forms and 10 times (14.7% of forms) in urban drug court forms ($p = 0.36$).

In some cases, participants reported that health concerns and conditions served as barriers to them in their recovery. The topic of mental health was frequently mentioned in participant Phase-Up and Graduation forms, both as a barrier to recovery and as an area where participants reported that they were focusing and investing their time and energy. Mentions of mental health difficulties such as social anxiety, stress, inability to deal with emotions, tendency to isolate, self-doubt, grief, shame, and/or fear of talking about addiction/ recovery occurred 26 times in the rural drug court forms (44.8%) and 22 times (32.3%) in the urban drug court forms ($p = 0.20$).

Participants from rural and urban settings frequently mentioned other "old habits," including unhealthy activities, habits, and triggers (people and places), as intrinsic barriers to recovery. This also included struggles to stay busy, avoid boredom, and bolster motivation. This was mentioned 18 times (31%) by the rural population and 19 times (27.9%) by the urban population ($p = 0.84$). In addition, participants consistently reported that "old ways of thinking" were barriers to recovery that needed to be overcome for their success. In a Phase 3 essay, a participant stated: "...I do have addict thinking patterns, it is much more beneficial to check down the ways to approach every

situation for me to ensure that I get it right. If I react on my first emotion, I usually approach stuff wrong." Results from both rural and urban settings reported that substance-using peers also served as a barrier to recovery. Interpersonal interactions could be dangerous and detrimental to recovery when family and friends of an individual were not supportive of their newly chemical-free lifestyle. Participants in both rural and urban settings reported having to cut off relationships with family and friends in order to move forward with their recovery. In addition, some participants reported struggles with public and community organizations that express negative attitudes toward people in recovery, which resulted in such organizations serving as a barrier to recovery rather than a support.

SUPPORTS IN RECOVERY

When participants were asked to list or describe goals through the Phase-Up forms we evaluated, both populations often mentioned domains of "Career," which included getting a job or promotion, a better job, more responsibility at work, or more hours. This also included the mention of creating a resume. For the rural drug court, this theme was mentioned 23 times (39.7% of forms), while for the urban drug court, it was mentioned 31 times (45.6% of forms) ($p = 0.59$). One participant wrote in his or her graduation essay that "I can definitely see myself being promoted or at least given a great amount of responsibility at my job, which will result in a pay raise which will make me feel less stressed and overall more happy…."

In addition, "Independence" was noted several times as a goal for participants in both counties. This included mentions of independence from probation, drugs, court, and of independence by means of getting a driver's license, catching up on child support, or having a vacation. This theme was isolated 12 times (20.7%) for the rural drug court forms and 14 times (20.5%) for the urban drug court forms ($p = 1.00$).

Regarding investments in health and well-being as a support, frequently mentioned domains for both groups included physical and mental health. "Physical health" included exercising, going to the gym, having healthier patterns of eating and sleeping, and in general, "feeling healthy." This was mentioned 22 times (37.9%) for the rural drug court and 23 times (33.8%) for the urban drug court ($p = 0.71$). In addition, "mental health" was identified as a theme of well-being investments for participants of both counties. This domain included mental health education, management, therapy, and doctor visits, as well as relying on others for help and expressing thoughts and feelings with them. Other scopes included medication, relaxation, change-thinking, and dialectical behavior therapy. Mentions of investing in mental health were counted 24 times (41.4%) for the rural drug court and 15 times (22.0%) for the urban drug court ($p = 0.022$).

Coinciding with reports of mental health investments and therapy, drug courts in this study provided participants with cognitive skills programming, which most participants reported as a support in their recovery. In addition, participants at both sites reported that one of their most significant "lessons learned" in the drug court process was the importance of honesty. Each drug court maintains that honesty and truthfulness are essential to recovery and success in the program.

Leisure activities, both hobbies and distractions, were reported to be strong supports in recovery by both rural and urban respondents. This domain included activities such as shopping, fishing, playing golf, bowling, playing music, writing, and more. Activities such as these were mentioned, in the context of support, 18 times (31%) by the rural

drug court, and 32 (47.0%) times by the urban drug court (p = 0.72). In addition, occupational tasks (yardwork, housework, farming, school), were noted as supports and mentioned 22 times (38%) for the rural drug court and 31 times (46%) for the urban drug court (p = 0.47).

The importance of strong interpersonal connections, including social support from family, friends, and the recovery community, was confirmed by rural and urban participants alike. Denoted as "support network" by our table of domains, both meetings and friends and family were mentioned frequently as supports. Meetings were mentioned almost equally for both counties, represented 42 times (72.4%) for the rural drug court and 45 times (66.2%) for the urban drug court (p = 0.33). Family and friends were noted as a strength 24 times for the rural drug court and 23 times for the urban drug court. Furthermore, a "sober network" (drug court graduates, mentor students, other recovery support persons) was mentioned 18 times (31%) by the rural drug court and 32 times (47.0%) by the urban drug court (p = 0.72). One participant stated, "I love my job and the people in my sober network, all my friends from NA/AA because they know everything about what makes me 'me.'"

Table 1. Barriers and Supports for Drug Court Participants

			Frequency of Mentions	
DOMAIN	**THEME**	**THEME DESCRIPTION**	**Rural Drug Court (n=58)**	**Urban Drug Court (n=68)**
1. Extrinsic Barriers to Recovery	Career	Unemployment, inability to work, work schedule, work challenges	5	3
	Housing	Lack of housing, forced relocation	5	2
	Financial	Debt	13	10
	Legal	Family courts, other states, other charges, felony status	4	1
	Support	Difficulty finding a sponsor, rebuilding trust, needing assistance from others, parents	7*	0
2. Intrinsic Barriers to Recovery	Physical Health	Health concerns	3	4
	Boundaries	Getting beyond desire to please people, learning to say no	3	0
	Old Habits	Correcting old habits/harmful thinking, avoiding triggers (places, people), struggles to stay busy and avoid boredom, lack of motivation	18	19
	Mental Health	Social anxiety, stress, inability to deal with emotions, tendency to isolate, self-doubt, grief, shame, fear of talking about addiction/recovery story	26	22

3. Goals	Education	Start school, continue school, diploma	8	28*
	Housing	House	5	14
	Career	Get job, get promotion, get better job, more responsibility at work, more hours, create resume	23	31
	Family	Spend more time with family, get custody of children, have more kids, be better parent, catch up on child support, finish pregnancy, get engaged	8	4
	Health	Improve physical health, get treated for disease, improve mental health, exercise more, quit smoking	4	7
	Relationships	Reconnecting mending relationships with family, friends, other support	8	9
	Independence	From probation, from drugs, from court, get driver's license, catch up on child support, vacation	12	14
	Finance	Pay off debt, apply for disability, consolidating student loans, file bankruptcy	4	19*
	Sobriety	Short term and long term, contact sponsor, finding sober friends	12	10
	Other	Get organized, structure/routine, time management, get hunting rights, positivity, singing in band, setting and achieving goals	14	18
4. Investing in Health and Wellbeing	Medical	Hep C, MAT (suboxone, vivitrol)	1	7
	Physical Health	Exercising, going to gym, eating healthy, sleep, feeling healthy	22	23
	Mental Health	Education, management, therapist, doctor, venting/complaining to others, relying on others for help, depression, anger, meditation/relaxation, dialectical behavior therapy, changing thinking	24*	15
	Self-care	Self-care	2	8
5. Spirituality	Church	Attending church	10	6
	Prayer	Utilizing prayers	5*	0
	Higher Power	Higher Power	13*	4
	Meetings	Spiritual meetings, bible study	5	1
	Reconnecting	With spirituality, negotiating, insufficient	2	4
	Cultural Traditions	Access to Native American traditions, sweat lodges, Native American community, smudging, pow-wows, Native American Prayer for self and others, Tribal Community Center, spiritual advisor, ceremonies (moon, renaming, general), traditional medicine, sobriety feasts/picnics, talking circle	35*	5

6. Leadership	Meetings	Chairing meetings (NA, AA), starting a father's support group	4	3
	Mentoring	Mentoring/helping other DC participants	5	5
	Community	Become more involved in the community	5	2
7. Hobbies and Distractions	Leisure Activities	Shopping, fishing, golf, bowling, disc golf, hunting, woodworking, crocheting,	18	32
	Social	Time with friends/family, volunteering	6	12
	Occupational	Yardwork, housework, farm work, work, school	22	31
	Sports	Basketball, swimming, biking, rollerblading, football, hockey, boxing, running, yoga	2	23*
8. Support Network	Meetings	Meetings	42	45
	Family and Friends	Family time, reconnecting	24	23
	Sober Network	Sober network, DC grads, mentor students	18	32
	Old Timers	Stories/examples for hope, “old timers”	8	6
	Sponsor	Sponsor as support	12	15
	Drug Court Team	Drug court team, probation officer, ARMHS worker, workforce center	6	5
9. Self-Awareness and Maturity	Understanding Addiction	Realization that life is unmanageable as an addict, hitting rock bottom, addiction is a disease/changes the brain, relapse is preventable	7	9
	Self-image	Positive self-image, confidence, appreciation for self	30	25
	Commitment to Recovery	Commitment to recovery, learning what works and is a priority for self, mindfulness, one day at time, recognition of high-risk situations/people, relapse prevention plan, learning how to stay sober, when to ask for help, humility	36*	26
	Accountability	Personal accountability, apologizing, importance of honesty, behaving “like an adult”, thinking differently about outcomes, realizing power of choices, understanding the gravity of the situation (life/death)	51*	43
	Redefining Relationships	Being able to ask for and receive help from others, ability to say no, patience with self and others, trying to listen more	13	6
	Changing Attitude	Identifying emotions, assertive rather than aggressive, emotional control/triggers, desire to be sincere, gracious, open-minded, hope for future	24*	10
	Skills Management	Coping skills, stress management, social/communication skills	6	15

9. Self- Awareness and Maturity	Social	Time with friends/family, volunteering	6	12
	Occupational	Yardwork, housework, farm work, work, school	22	31
	Sports	Basketball, swimming, biking, rollerblading, football, hockey, boxing, running, yoga	2	23*
10. Children	Stress and Balance	Coping/dealing with child, stressor, single parenting, work/life balance, kids activities	5	4
	Reconnecting	Getting kids back/custody	12	9
	Parenting	Protection of children from dependency, kids with mental health/addiction concerns	8	6

*Statistically greater number of mentions per Fisher Exact Test, $p \leq 0.05$.

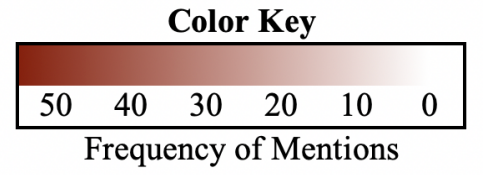

Table 2 provides examples of participant quotes organized by domain, with quotes from both the rural and urban drug courts included in the study.

Table 2. Drug Court Participant Quotes Organized by Domain

DOMAIN	QUOTE
Extrinsic Barriers to Recovery	Running into old friends is a trigger. I tell them that I am sober now and if they don't mind I would rather not talk to them anymore. – Rural County Using people are my biggest trigger, so I have removed these people completely from my life. – Urban County
Intrinsic Barriers to Recovery	I think the most important lesson I learned in Drug Court is that my thinking can be flawed and not always be what is best for me, which is why talking with someone I trust about how I'm feeling is a very helpful tool in making the right choices in life. – Rural County I believed I needed to please people for them to like or love me. This got me into a lot of trouble. I became a follower, instead of the leader I know I can be. – Urban County
Goals	I'm doing great with my goals, all of them! School, work, family, probation, sobriety, running, boxing, staying organized! – Rural County I'm working on getting my drivers license back and maintaining my house bills, which won't be a problem once I get back to my job. – Urban County

Table 2 Cont. Drug Court Participant Quotes Organized by Domain

DOMAIN	QUOTE
Investing in Health and Well-Being	To manage my stress, I'm learning to live balanced and healthy. I've completely eliminated any fast food from my life, I don't need that nasty fake food in my life. I've also learned to open up with my loved ones about my stress and anxiety, that helps me a lot to have outlets for talking. – Rural County Physically, I feel great. I've been working out at least five days a week and eating as healthy as possible. I've also been getting enough sleep and am not having as many issues with my insomnia. – Urban County
Spirituality	I usually smudge with sage or sweet grass when things get to be a little too much. I find that smudging really helps...smudge, say a little prayer, and go on with the rest of the day. – Rural County I pray to my Higher Power every morning and ask for strength every day to positive in life and to stay as strong as I am now. – Urban County
Leadership	I'm starting a fathers support group with my Uncle. – Rural County I chair 2-3 meetings a week and try to connect with as many people from the club as possible. – Urban County
Hobbies and Distractions	I have been helping my grandpa out recently because he moved, but also like going to the YMCA, beach, running, fishing, hockey. – Rural County I love to work on vehicles and fix and customize them 'cause its what makes me happy. – Urban County
Support Network	Not only did they [drug court team] see me through the darkest times of my addiction, but they loved when I couldn't love myself. – Rural County Just listening to other peoples' stories helps me to stay sober. – Urban County
Self-awareness and Maturity	That a thought is just a thought, what kind of power you put into it is what makes it positive or negative. – Rural County When I was using I was a mess. I lied to people, cheated people, stole from people, and made just about every other stereotypical action that a drug addict makes. I ruined many important relationships, I lost jobs, created huge debts, and dragged my family name through the mud. I basically ruined everything good in my life just to get high. – Urban County
Children	My son - even though he doesn't know it - keeps me on my feet and head held high every day. – Rural County My children, not only are they my motivation, but they are able to act as my strength when needed. – Urban County

A finding shared between participants in the two drug courts studied was the improved self-esteem and pride in one's accomplishments that was cited as participants progressed through the drug court program and achieved goals that they had set for themselves. Participant reports with an increase in self-esteem aligned with their reports of an increased willingness and desire to take on leadership roles in the recovery community. Leadership roles include chairing sobriety support meetings, providing support to others in the drug court, and eventually serving as a sponsor for others.

"Self-awareness and maturity" is a domain that encompasses personal and introspective support in recovery. The most frequently mentioned themes in this domain were: self-image (confidence and appreciation of self), commitment to recovery (self-prioritizing, mindfulness, learning how to ask for help and stay sober, relapse prevention plan, risk recognition), and accountability (apologizing, operating on honesty, realizing the power of choice, thinking differently about outcomes, understanding the gravity of the situation, behaving "like an adult"). Comments relating to self-image were mentioned 30 times (51.7%) for the rural drug court and 25 times (36.8%) for the urban drug court ($p = 0.11$). Following suit, prose relating to a commitment to recovery was expressed 36 times (62.1%) by participants in the rural drug court and 26 times (38.2%) by those in the urban drug court ($p = 0.012$). Finally, terms and mentions relating to accountability were isolated the most frequently, with 51 mentions (87.9%) in the rural drug court and 43 (68.2%) mentions in the urban drug court ($p = 0.002$). Exemplifying growth, maturity, and self-awareness, one participant stated, "...instead of when I'm having a problem to not just run to drugs, I can utilize my family to talk to and help me through things. I also learned how to think differently, thinking about the outcome before acting."

Finally, though not the most populous domain, reconnecting with children as a support and motivation was almost equally represented for both groups. Reuniting with children or obtaining custody was mentioned 12 times (20.7%) by the rural drug court and nine times (13.2%) by the urban drug court ($p = 0.34$). On one form, a participant noted activities involving his or her child, including "learning to be a parent," "playing with my child," and "doing things for my social worker to get my son back."

RURAL AND URBAN DIFFERENCES

This study did find reported differences between participants in the rural and urban drug courts. The lack of transportation for rural drug court participants was cited as a major barrier for participants without a driver's license or vehicle who wish to attend meetings or other social support functions, obtain and keep employment, attend required drug court functions, and keep appointments with health and mental health providers. In addition, rural drug court participants noted that a lack of support from their relationships and the general community was a notable extrinsic barrier to recovery. Participants from the rural drug court mentioned key words and phrases that encompassed themes such as difficulty finding a sponsor and rebuilding trust. This also included the difficulties of needing assistance from family members or other relationships. Themes around these issues were mentioned seven times for rural participants (12.1% of forms) versus the urban participants who did not mention difficulties finding a sponsor and rebuilding trust. This difference was found to be statistically significant ($p = 0.004$).

Though both areas mentioned career-related goals as a prominent feature in their lives, participants in the urban drug court cited career development more often, including plans to seek a promotion, obtain additional education,

or seek a job with better hours (31 mentions, or 45.6% of urban court forms, versus 23 mentions, or 40.0% of rural court forms). This difference was not statistically significant between the two groups ($p = 0.59$). Participants in the urban drug court also reported that work occupies their time more often than the rural drug court participants. Urban drug court participants identified education goals much more frequently than the rural population, with 28 references (41.1%) that referred to subjects including starting or continuing education, or obtaining a diploma compared to only eight mentions (13.8%) by rural drug court participants ($p < 0.001$). In addition to work distractions, urban participants mentioned "sports" as hobbies and distractions more frequently than did rural participants, with 23 references (40.0%) to activities such as basketball, swimming, biking, rollerblading, football, hockey, boxing, running, and yoga. Rural drug court participants mentioned these activities only twice (3.4%) ($p < 0.001$).

Participants in the rural drug court, approximately half of whom are Native American, more often reported that cultural activities were a source of healing and strength for them. Rural participants mentioned cultural traditions 35 times (60.3%) versus the urban participants who mentioned cultural traditions only five times (7.4%), which is significantly less ($p < 0.001$). Cultural traditions included sweat lodges, the Native American community, smudging, pow-wows, Native American prayers for self and others, Tribal Community Centers, having a spiritual advisor, and cultural ceremonies. In addition, there were 13 mentions of a "higher power" (22.4%) and 10 mentions of attending church (17.2%) by rural drug court participants, in contrast to urban drug court participants, where a "higher power" was mentioned only four times (5.9%) and attending church only six times (8.8%). None of these differences between rural and urban were statistically different.

Furthermore, rural participants in this study more frequently described a "changing attitude" subset of self-awareness and maturity than did urban participants. Mentions of identifying emotions, being assertive rather than aggressive, practicing emotional control and triggers, having a desire to be gracious, and having hope for the future were all reflections documented by the rural drug court that took part in this study. There were 24 mentions of "changing attitude" by rural drug court participants (41.4%) but only 10 mentions by urban participants (14.7%), a difference that was determined to be statistically significant ($p = 0.001$). More rural drug court participants offered suggestions on how the drug court experience could be improved. Although the reasons for this are unclear, this may be due to the rural drug court being a newer court, where feedback from participants was routinely sought and addressed. More rural drug court participants reported that drug court taught them when to ask for help and that this ultimately aided in their recovery.

DISCUSSION

The SEM, suggested as a way to study and design interventions addressing complex public health issues, has shown promise in studies focusing on drug court participants (Morse et al., 2015). In the current study, findings revealed that adult drug court participants in rural and urban courts experience complex systemic barriers to achieving health and recovery, in addition to individual and personal barriers. They also have uniquely identified supports, some similar and different based on urban and rural differences.

RURAL AND URBAN DIFFERENCES

This study found reported differences between participants in the rural and urban drug courts, exemplified in rural counselors reporting disadvantages with a lack of basic facilities due to insufficient funds, while urban counselors reported inadequate funding felt by a heterogenetic and high volume of clients (Pullen & Oser, 2014). Exacerbating the problem of fewer treatment and recovery facilities in rural areas, participants who live in rural areas are more geographically isolated with fewer or no public transportation options (Sung, Mahoney, & Mellow, 2011).

Rural drug court participants mentioned having extrinsic barriers to recovery more often than urban drug court in all categories (Table 1), reporting having difficulty finding a sponsor, rebuilding trust, and/or needing assistance from others or parents significantly more often than urban participants. These findings are consistent with previous research showing rural communities face a considerable lack of basic facilities and infrastructure compared to urban centers, as well as greater transportation challenges (Pullen & Oser, 2014). In regard to the social extrinsic barriers, rural participants have previously emphasized a greater impact of family relationships. While this might initially suggest an intrinsic benefit, many of these participants are coming from families of substance abuse. Thus, it may be hard for them to gain the familial support necessary when many family members are still using. Additionally, because of the importance of these family ties, rural participants may be more concerned with what their family members think, presenting a greater barrier to asking for help and larger concern for rebuilding trust. Going forward, it will be necessary to determine how to best address these extrinsic barriers and better utilize familial ties as a benefit where possible.

Rural drug court participants mentioned having extrinsic barriers to recovery more often than urban drug court in all categories (Table 1), reporting having difficulty finding a sponsor, rebuilding trust, and/or needing assistance from others or parents significantly more often than urban participants.

Rural drug court participants also mentioned the lack of mental health services as an intrinsic barrier to recovery more often than urban drug court participants, although this difference was not statistically significant. This lack of significance is not wholly unsurprising, as previous research has indicated that both rural and urban substance use counselors struggle to find mental health services for their clients (Pullen & Oser, 2014).

In the "Goals" domain, urban drug court participants mentioned goals more often in most categories, with a statistically significant difference being found in goals related to education and finance. Some examples of education and finance goals in our study include filing for bankruptcy, consolidating student loans, receiving a diploma, paying off debt, and starting or continuing school. The more numerous mentions of education goals for urban participants has the potential to align with previous research showing that urban drug courts tend to have a greater range of services available to participants than rural courts (Bouffard & Smith, 2005). Transportation, noted by Pullen and Oser (2014) as a disparity in rural populations, could also be a barrier to services that could further education and

financial goals in rural settings.

In the domain focused on "Investing in Health and Wellbeing," differences between rural and urban courts were found, although none proved statistically significant. Urban participants mentioned medication-assisted treatment (MAT) more often (seven times) than rural participants (one time), which is not surprising as MAT was not readily available to rural participants during this study period.

Differences in "Spirituality" were found in the themes of prayer and cultural traditions, where rural participants, many of whom are Native American, mentioned these supports significantly more often than urban counterparts. This is consistent with the literature, which suggests that Native American cultural practices can have a healing effect for individuals who have a substance use disorder (Gone, 2011; Gone & Calf Looking, 2011). The largest gaps of urban and rural differences in this theme included utilizing prayer, mention of a "higher power," and access to Native American cultural traditions such as sweat lodges, smudging, pow-wows, and other native ceremonies. This is likely explained in part by the rich cultural traditions brought to the rural drug court team by a local Tribal Nation. The validity of these supports is bolstered by Rowan et al.'s study (2014), which sought to understand cultural-based interventions and their effects on outcomes when integrated into substance use treatment. Their results suggested that culture-based practices used in substance use treatment help to improve wellness outcomes for Indigenous populations. This supports the statements of many of our rural participants, who asserted the importance of spiritual and cultural practices in their recovery

Rural and urban participants both mentioned leadership opportunities as a component of their journey with drug court, including chairing meetings, mentoring other participants, and becoming more involved in the community, though these mentions were relatively few compared to other supports. Similarly, both rural and urban participants cited domains including "Hobbies and distractions" as well as "Support networks" as being helpful support to recovery, though "Hobbies and distractions" were more frequently cited by urban participants, as well as access to a sober network. This could be partially attributed to a general lack of services for rural populations (Bouffard & Smith, 2005) and lack of transportation for rural areas (Pullen & Oser, 2014). Hobbies included fishing, bowling, music, and reading, while support networks encompassed attending meetings, reconnecting with friends and family, having a sober network, and engaging with a sponsor and drug court team members, among others. Notably, meetings were the highest mentioned support of this group for both rural and urban participants. As a support for abstinent recovery, this is consistent with findings from the 2007 study by Gossop et al., which found that a higher likelihood of abstinence from alcohol and opiates was present in participants who frequented AA or NA meetings compared to those who did not.

In the domain "Self-awareness and maturity," significantly more mentions of a commitment to recovery, the importance of changing one's attitude, and accountability were made in the rural group compared to the urban group. Commitment to recovery included mindfulness, recognition of high-risk situations and people, humility, and having a relapse prevention plan, among other things. Items grouped under "Changing Attitude" included identifying emotions, a desire to be sincere, hope for the future, and understanding emotional control and triggers. Accountability included mentions of thinking differently about outcomes, understanding the power of choices and the gravity of substance use disorders, and the importance of honesty, among others. While respondents provide no

concrete reasoning to explain these differences in prevalence of these mentions between rural and urban respondents, it may be worthwhile to consider the co-occurrence of increased mentions of self-awareness and spirituality in rural populations.

Both groups mentioned "children" in their reflections; however, no statistically significant differences were found in the number of mentions between rural and urban respondents. While children were generally seen as a motivation for recovery, the stress that comes with parenting, reconnecting with children and financially supporting children could also be seen as a barrier, although this was not explicitly stated as such.

SUGGESTIONS FOR DRUG COURT IMPROVEMENTS

While every drug court jurisdiction presents unique needs and struggles in the area it serves, we have assessed differences between participant reported supports and barriers for two neighboring rural and urban drug courts as well as participant-mentioned areas for improvement. Supporting drug court participants in obtaining chemical-free housing was frequently mentioned by participants in both the rural and urban drug court as a priority for drug court teams, with a lack of housing cited being categorized as an extrinsic barrier (five mentions for rural participants, two mentions for urban participants) and the goal of obtaining housing being categorized as a goal (five mentions for rural participants, 14 mentions for urban participants). In addition, employment assistance and support in pursuing additional education, as components of wrap-around care, should also be a priority. Participants frequently cited having a criminal history and limited work history as barriers to employment and, consequently, barriers to recovery. Along the same lines, financial debt was cited as an extrinsic barrier to many resources that would aide participants in recovery. This debt could include money owed to family or friends, court fines, vehicle loans, home loans, educational loans, debt owed for childcare, or debt accrued in other ways. Some participants reported feeling pressure to pay off these debts by working, rather than investing a great deal of time in treatment. A closer look at impactful financial assistance by drug court teams is suggested by our research. This could include assisting drug court participants by providing them with general financial education, exploring affordable loan repayment options, and guiding them to resources that can reduce the costs associated with childcare, housing, medical and dental care, and household expenses.

Barriers involving "high-risk people" and the need to recreate a participant's social network in recovery was frequently mentioned in our study. Our study suggests that attention to assistance in establishing social networks and social supports as an alternative to "high-risk relationships" would be a beneficial investment for drug court teams. This can include support in forming new social networks and support for those forced to cut off close relationships with friends and families by introducing participants to mentors and sponsors in the community, inviting and incentivizing them to participate in chemical-free community and social events, and encouraging their attendance at AA and NA meetings in the community. Closely related are the barriers of "old habits," which can include the "people and place" triggers frequently mentioned by drug court participants in this study. Assisting participants to identify methods and activities to stay busy, avoid boredom, and bolster motivation would appear to be a good use of drug court time and resources.

Mental health was a barrier identified by the participants in our study, including difficulty dealing with emotions and/or fear of talking about addiction and recovery. This also coincides with "old ways of thinking," which was also

cited as a barrier. Advocacy by drug court team members in support of resources specifically dedicated to cognitive behavioral therapies and additional mental health services for persons fighting addiction is one suggestion for continual drug court improvement. This is especially the case in rural and underresourced communities, where shortages of mental health practitioners and treatment facilities have created a public health crisis. Some participants also mentioned negative attitudes of the community and public organizations as a barrier to recovery, coinciding with a "fear of talking about addiction and recovery." This stigma surrounding substance use disorders is a barrier to recovery and can often lead to refusing treatment for fear of what others may think. Treating participants in an unbiased way and encouraging support for participants can help lessen their fears of stigma within the community. Inviting community members to witness and celebrate the success of drug court participants, to observe how drug court can support individuals in their recovery, allows participants to engage more fully in the community while also providing the community with education to reduce stigma.

Furthermore, rural disparities that were presented in our results illustrate gaps that drug courts can strive to address. Even basic services such as transportation, sober activities, and substance use/mental health treatment facilities are often unavailable to rural participants. Rural participants mentioned more difficulty in finding a sponsor and rebuilding trust, in addition to needing more assistance from family members and close relationships. These are all areas that rural drug courts may strive to strategically address to better support rural participants by continuously assessing where there is a lack of resources available that would prevent participants from receiving the help they need and identifying areas for improvement. While rural communities may have fewer resources, they often have the benefit of closer working relationships among the community and drug court team that can be helpful in getting a participant the support and resources they need in a timely manner. Rural drug courts may need to seek innovative solutions to address the barriers that their participants face more often than urban drug courts.

Rural participants were noted to have significantly fewer mentions of career-related goals than urban participants inferring a potential lack of career opportunities. This is a disparity to pay more attention to in further research of geographically isolated drug court participants. Making sure participants have the needed resources to help them find a career and transportation to that career can be crucial in maintaining a substance-free lifestyle. Using the strengths of relationships in rural areas—including those between team members, participants, graduates, and community supporters—is important in providing participants with career opportunities as well as social support in their recovery. There were also fewer mentions of hobbies or sports by rural participants, suggesting a void of opportunities for such activities for rural residents. However, there was hope for rural drug court participants: rural participants mentioned spiritual practices and beliefs as important supports in their life, in contrast to urban participants. Our research supports bolstering access to spiritual practices and facilitation of spiritual services as a part of the treatment approach for participants who prescribe to beliefs. Native practices as a part of this spiritual subset were noteworthy supports mentioned by rural participants and an area of suggested drug court coordination and support. Engaging local spiritual and religious leaders in drug court activities may allow participants to widen their social circles while also receiving support to pursue healing spiritual and religious practices.

Finally, our research points to differences in the request for drug court feedback between counties. The rural population was more likely to give feedback regarding the drug court process, possibly because of its newer emergence as a court system where feedback may have been more often solicited. Best practice dictates that frequent

and pertinent requests for feedback should be sought from participants across a diversity of populations and regions; the reduced number of feedback requests from the urban population in our study suggests the potential need for a more rigorous effort to obtain feedback from this group.

LIMITATIONS

Our study included two populations in a single state; results are not generalizable to other drug court settings (although our findings may still be applicable to other courts). Analysis of Phase-Up and Graduation forms from other drug courts would be useful in determining how drug court participants' perceived barriers to and supports in recovery between different geographical regions and settings. In addition, Phase-Up and Graduation forms were not identical between the counties studied. This poses a limitation in comparisons between counties, as a common document for evaluation could not be obtained. Another limitation is that the process of coding and data collection was undertaken entirely by hand; and outside of an academic setting this could be an issue due to the time commitment required. Furthermore, the responses and ideas presented in the forms changed over the timeline of 27 months. Different forms for Phase-Up and Graduation were sometimes submitted from the same county. Despite small differences, the general themes and main areas of this study (supports, barriers, rural/urban differences) were still able to be assessed in these distinct counties and at slightly different periods in time.

Drug court structures and systems are not consistent across state or national jurisdictions (King & Pasquarella, 2009). This provides limitations in that the systems used by the counties studied are not necessarily the same systems used by another county. While basic guidelines stay the same for U.S. drug courts, many processes are adapted and altered to a local basis. This creates benefits and shortcomings for the drug court program and also makes cross-jurisdiction studies difficult. Because of these differences, a control "system" is unable to be determined, when comparing data from the two counties.

In addition, because of the anonymity provided by the study, researchers were not able to tell when Phase-Up and Graduation forms were filled out by the same individual. The inability to tell when forms came from the same individual makes it impossible to tell when this trend occurred or how it influenced the data. Additionally, the "voices" of some drug court participants may be better represented in the data because they phased up more frequently and/or graduated while other drug court participants may not have. These phenomena could increase positive selection bias, where the "voices" of more "successful" drug court participants (those who phase up and graduate) may be better represented in the data than those who did not phase up or graduate. Because of this, it is possible that the frequently mentioned barriers are not as detrimental as the less frequently mentioned ones, or additional barriers that were not mentioned. Because of the relatively small number of individuals included in this study, certain themes were mentioned infrequently even though they may be known to be important to those working closely with drug court participants.

Additionally, we cannot discount the forced structure of the Phase-Up and Graduation forms or the subsequent potential that some participants may write reflections that they believe will be pleasing to the drug court Team in order to be more successful in the drug court program. However, team members observed that the participants who were doing well in the program and who had the opportunity to report this success on the forms were

generally authentic, open, and honest about their successes and struggles. As individuals progress through drug court programs, they became more honest and authentic about their own strengths and weaknesses, and this could therefore be reflected in the forms collected.

There is a notable difference in demographics between the urban and rural groups, with the rural group being 50% Native American and the urban group only 10% Native American. This is a potential confounding variable that can lead to variation between the two groups. The Phase-Up and Graduation forms for the two groups were also slightly different, which could have led to slightly different responses.

CONCLUSIONS

This study allowed for the voices of drug court participants in two neighboring counties to be heard. Using a CQR process, this study identified what drug court participants see as their major extrinsic and intrinsic barriers to recovery, as well as the strengths and supports that kept them moving forward. Furthermore, supports and barriers were assessed in the context of rural and urban populations, meeting a critical research gap. Overall, this study began to address the need for participant-perspective testimony and qualitative data in drug court literature. This analysis confirmed the need for wraparound care that includes chemical-free housing, education, employment assistance, and attention to the role that rural health disparities, including financial debt, transportation, and a lack of access to mental health resources, play in the recovery process. Recognizing the impact of relationships and how stigma or certain people can act as triggers is important in identifying barriers to recovery. On the other hand, relationships that provide a support network and accountability can support drug court participants' recovery. Also, identifying that certain areas such as the rural drug court may have additional needs for support including spirituality and cultural traditions is important to tailoring each drug court to the participants' needs. Considering that the results of this study are the first to identify supports and barriers to recovery for participants in rural and urban drug courts, these findings have the potential to inform further research and drug court development.

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AN OVERVIEW OF THE RURAL TREATMENT COURT TRACK

Zephi Francis[1] and Steven Czarnecki[2]

VALUE STATEMENT

This conference summary provides a snapshot of several emerging topics discussed during the Rural Treatment Court Track at the 2019 National Association of Drug Court Professionals' (NADCP) All Rise Annual Conference. In particular, it offers creative solutions to address issues rural treatment courts encounter.

ABSTRACT

We provide a comprehensive summary of the 2019 Rural Treatment Court Track at the National Association of Drug Court Professionals' (NADCP) All Rise Annual Conference. The track illuminated unique challenges in rural treatment courts, including but not limited to a lack of substance use disorder (SUD) treatment providers, an absence of housing for participants, and inadequate funding for operations. The Rural Treatment Court Track explored practical solutions treatment court professionals have applied to these challenges. Several of the solutions included using telemedicine to administer medication-assisted treatment (MAT), establishing Oxford Houses, providing participants aftercare, promoting inter/intra-agency collaboration, and using federal funding opportunities.

KEYWORDS

Rural treatment courts, substance use disorder treatment, ancillary services, agency collaboration, federal funding

INTRODUCTION

The purpose of the Rural Treatment Court Track was to present the most pressing problems rural treatment courts encounter coupled with innovative solutions. The track was held during the 2019 National Association of Drug Court Professionals' (NADCP) All Rise Annual Conference held at National Harbor, Maryland. Jeffrey Kushner (Montana's Statewide Drug Court Coordinator) organized presentations and panels with assistance from American University's Justice Programs Office (JPO) and the Center for Court Innovation (CCI). The multiday event featured experts such as treatment court team members, medical staff, and federal government workers from across the United States. The conference provides a great opportunity for all those associated with treatment courts to come together to discuss best practices and set the stage for innovation and new developments within treatment courts. However, some treatment court professionals were not able to attend the conference, and with those people in mind, we have dedicated this article to recap the track. This summary highlights several topics that emerged from this conference: (1) telehealth, (2) housing assistance, (3) aftercare, (4) collaboration, and (5) funding availability.

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TELEHEALTH

One of the issues raised during the conference was the lack of medical professionals in rural communities. Consequently, many participants do not receive the help they need, or must travel long distances to receive it. A suggested solution was providing telehealth, which is the facilitation and provision of health-related services through electronic methods. This format allows for healthcare providers to offer services to clients remotely. At the conference, a rural treatment court coordinator discussed how their treatment court was able to offer opioid use disorder participants medication-assisted treatment (MAT) even with a dearth of doctors in the area. To conduct this process, a local nurse gave clients medications and a physician consulted with patients through their smartphones. Additionally, in some rural areas, there is an insufficient number of counselors. Several treatment courts have started video conferencing to connect rural participants with therapists who may not be in their region. Virtual therapy sessions enable participants to obtain the essential counseling and behavioral therapies that should be combined with the use of MAT.

While rural communities may have fewer resources, they often have the benefit of closer working relationships among the community and drug court team that can be helpful in getting a participant the support and resources they need in a timely manner. Rural drug courts may need to seek innovative solutions to address the barriers that their participants face more often than urban drug courts.

HOUSING ASSISTANCE

As participants enroll in treatment courts, the availability of ancillary services is vital for the success of participants. Ancillary services are basic requirements that treatment court participants need as they reintegrate into society. These needs include employment readiness programs, education programming (e.g., GED), health care, transportation, and housing assistance. However, many treatment courts struggle with providing these services. In particular, housing was a big struggle for many rural jurisdictions. Several treatment courts have partnered with Oxford House, Inc. There are funding opportunities available to build new homes under this model. The Oxford House method offers transitional housing to individuals recovering from drug and alcohol addiction. The purpose of this housing program is to allow residents to reside in a self-supported, sober living home environment with other residents in recovery.

AFTERCARE

Once participants graduate from a treatment court, they are under less supervision and more vulnerable to relapse. Many programs do not have the resources to create and sustain an aftercare component, but research has documented that repeated contact with justice-involved individuals within the first 90 days after their involvement ends has a significant impact on relapse prevention and recovery maintenance (Scott & Dennis, 2012). Several treatment courts have implemented a user-friendly tool called the Recovery Maintenance Check-In. The tool has a series of questions used to gather information over the phone about any needs a client may have so the treatment court team can connect them with the appropriate resources. It is recommended that the tool be administered at several different intervals for 36 months postgraduation (Sumner & Kushner 2014).

COLLABORATION

Collaboration within a treatment court is tantamount to the success of any program, including inter/intra-agency partnerships. There is a need for treatment court programs to collaborate with multiple federal agencies in order to effectively fund their courts and empower their participants to succeed. Beyond external collaboration, however, is the need to collaborate within treatment court teams themselves. For example, a case study of effective inter-team communication comes from Ogle County in Illinois. The constant use of email and text messages allows all members of the treatment court team to be fully informed with each participant's progress. It is an unmitigable risk with participants in treatment courts that the worst-case scenario can occur and having every team member up to date on a participant is valuable when responding to these scenarios. A further level of collaboration within the team comes from the work that probation officers conduct. Ogle County Drug Court requires that participants make themselves available for unannounced visits from probation officers, which provide significant insights on how participants are doing compared to the regular probation appointments. After the completion of these visits, an email is sent to all members of the team with a report of the visit. This level of collaboration from the probation department illustrates the benefit of all team members' commitment to the overall goal of the treatment court.

FUNDING AVAILABILITY

For some treatment courts, having enough funding to operate effectively is an issue. As a result, it was beneficial to have a session in the Rural Treatment Court Track dedicated to funding resources. An abundance of funding opportunities are available for rural treatment courts and extend further than just the treatment-court-specific funding available from the Bureau of Justice Assistance (BJA). The Office of National Drug Control Policy (ONDCP) and the United States Department of Agriculture (USDA) were the creators of the Federal Resources for Rural Communities to Help Address Substance Use Disorder and Opioid Misuse. This guide provides an exhaustive list of all the grants and loans available to rural communities and is separated into 26 categories, including transportation, housing, infrastructure and substance use disorder. The available grants include, among others, planning grants from BJA to help new treatment courts establish themselves and train their team members and a Rural Health Care Services Outreach Program provided by the United States Department of Health and Human Services, which provides funding to extend existing health care services into rural communities. Additional grants within this guide include Access and Mobility Partnership Grants to help bridge gaps between service providers and health care recipients, as well as an Enhanced Mobility of Seniors and Individual with Disabilities Program, both provided by the Federal Transit Authority. The latter of these grants

considers those suffering from substance use disorder as individuals with a disability and provides resources to help these treatment court participants attend treatment, counselling, and court appointments.

CONCLUSION

As we think about combatting drug issues and the impacts they have on rural communities, treatment courts play an important role. To operate successful rural treatment courts, there must be a consistent review of operations and procedures to identify problems and then come up with innovative solutions. The Rural Treatment Court Track sheds light on the unique issues that rural treatment courts encounter, while also providing solutions. It was evident from the presenters that they were committed to implementing effective strategies with the goal of empowering their participants to lead lives of recovery.

To operate successful rural treatment courts, there must be a consistent review of operations and procedures to identify problems and then come up with innovative solutions. The Rural Treatment Court Track sheds light on the unique issues that rural treatment courts encounter, while also providing solutions.

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