

Summer 2019

# The Use of Vouchers to Negatively Reinforce Number of Weeks Compliant Among Clients in a Mental Health Court

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THE USE OF VOUCHERS TO NEGATIVELY REINFORCE NUMBER OF WEEKS  
COMPLIANT AMONG CLIENTS IN A MENTAL HEALTH COURT

A Dissertation  
Presented to  
The Faculty of the Department of Psychology  
Western Kentucky University  
Bowling Green, Kentucky

In Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Psychology

By  
Michele N. Murdock

August 2019

THE USE OF VOUCHERS TO NEGATIVELY REINFORCE NUMBER OF WEEKS  
COMPLIANT AMONG CLIENTS IN A MENTAL HEALTH COURT

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I dedicate this dissertation to my mom and dad, Cathy and Robert Murdock.

Thank you for always being there for me every step of the way. You are my biggest supporters and you have never wavered in your belief that I would be successful! You are the reason I always have and always will “work hard, learn a lot.” You have been so proud of my accomplishments and believed in me, even when I couldn’t see it within myself. Without your never-ending encouragement, I couldn’t have made it this far! And to my husband, Zach Morrow, thank you for remaining on this long journey with me. You knew what you were in for from day one and yet you stayed right by my side through it all. You have sacrificed so much to help me succeed, and I appreciate you more than you may ever know!

## ACKNOWLEDGMENTS

I would like to express my deepest appreciation to my committee chair, Dr. Carl Myers, who has continually supported and helped me in regard to this research project. Without his advisement and constant assistance, this dissertation would not have been possible. I would like to thank my committee members, Dr. Sally Kuhlenschmidt and Dr. Tim Thornberry, for their input into the design of this experiment; your expertise solidified and improved my study in many ways. Additionally, a thank you to Dr. Frederick Grieve, for all of your supervision and guidance throughout the years.

I would also like to thank the mental health court judge for granting me permission to run the current study and the clinical director for tracking my data and keeping me updated throughout the entire process.

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# THE USE OF VOUCHERS TO NEGATIVELY REINFORCE NUMBER OF WEEKS COMPLIANT IN A MENTAL HEALTH COURT

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August 2019

56 Pages

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The literature is sparse on the use of contingency management procedures in a mental health court (MHC). The purpose of this study was to examine the use of negative reinforcement for behavioral changes in a MHC. Specifically, the present study explored whether a voucher-based contingency management intervention improved the number of weeks compliant on MHC probation and whether participants were more externally than internally motivated to comply with MHC probation requirements. Vouchers were given for compliance with MHC probation requirements. The vouchers allowed participants to miss a future court date. It was hypothesized that participants who received the voucher would remain compliant on MHC probation for more weeks than participants who did not receive the voucher. The second hypothesis stated that participants, regardless of condition, would be more externally motivated than internally motivated to comply with MHC probation requirements. Twenty-two MHC participants were tracked from treatment entry for the first 24 weeks of their MHC probation to determine the number of weeks compliant with MHC probation requirements. The first hypothesis was not supported, as participants receiving the voucher were not compliant more weeks than those participants not receiving the vouchers. The second hypothesis was not supported in that the participants were not more externally than internally motivated. Additional interpretation of the results, limitations of the study, and recommendations for future research are discussed.

## **Introduction**

The number of offenders diagnosed with a mental illness who are involved in the criminal justice system in the United States is alarming. In 2015, the total number of jail inmates incarcerated was 721,300, which remained stable from 2011 to 2015 (Bureau of Justice Statistics [BJS], 2016). Of these jail inmates, approximately 26% of males and 32% of females are diagnosed with a mental illness. The most common mental health diagnoses reported in jail are major depressive disorder, bipolar disorder, an anxiety disorder, posttraumatic stress disorder (PTSD), schizophrenia and other psychotic disorders, and personality disorders (BJS, 2017).

Due to the problems faced by offenders diagnosed with a mental illness, mental health and other professionals advocated for diversion programs, which use the leverage of the criminal justice system to obtain mental health treatment and social services for these individuals. Diversion is a program in the criminal justice system designed to enable offenders to avoid criminal charges and a criminal record. Diversion programs include drug court, mental health court, veteran's court, domestic violence court, and sex trafficking court. Diversion programs, even with treatment as usual, produced fewer days in jail and no increase in recidivism. That is, there was no increase in the tendency to relapse into criminal behavior (Steadman & Naples, 2005).

One such diversion program, mental health court (MHC), was established as a nationwide non-adversarial approach that involves a collaborative effort between criminal justice and mental health professionals (McNiel & Binder, 2007). Compared to traditional court participants, MHC participants had a re-arrest rate half that of similar participants. Further, those participants who completed MHC successfully and graduated

from the program had a re-arrest rate one-fourth that of participants in traditional court. To graduate from the program, participants must remain compliant with probation requirements for most, if not all, of their MHC probation (McNiel & Binder, 2007). Such requirements mean changing problem behaviors to improve compliance (e.g., compliance with mental health treatment, substance abuse, etc.).

Contingency management is an evidence-based therapeutic intervention, which uses rewards or punishment to change behavior (Trotman & Taxman, 2011).

Contingency management has been used effectively in a wide variety of settings, including medical settings, substance abuse settings, and probation environments (Marlowe, Festinger, Dugosh, Arabia, & Kirby, 2008; Prendergast, Hall, Roll, & Warda, 2008; Trotman & Taxman, 2011). Contingency management is based on operant conditioning, where behaviors that are reinforced are more likely to increase over time and behaviors that are punished are more likely to decrease over time.

Although there is consistency among all MHCs regarding using jail as a last resort for non-compliance, there is not uniformity of incentives used to promote behavioral changes. The purpose of this study is to examine the use of a potential reinforcer for behavioral changes in MHC because there is currently a gap in the literature addressing these concerns.

The present study looks at whether a voucher-based contingency management intervention improves the number of weeks compliant on MHC probation. It is hypothesized that participants who receive the vouchers will remain compliant for a greater number of weeks than those who do not receive the vouchers. It is also

hypothesized that those who receive the vouchers will be more externally than internally motivated to comply with MHC probation requirements.

## **Literature Review**

### **Mentally Ill Offenders in the Criminal Justice System**

According to the U.S. Department of Justice (BJS, 2017), jails are locally operated short-term facilities that hold inmates awaiting trial or sentencing or both. Jail inmates are sentenced to a term of less than one year. Prisons are long-term facilities run by the state or the federal government that typically hold felons and persons with sentences of more than one year (BJS, 2017). For the purposes of this study, the focus was on jail inmates.

In 2015, there were 10.9 million daily admissions to jail (BJS, 2016). These inmates were officially booked and housed in jails by formal legal documents and the authority of the courts or some other official agency. Approximately 721,300 inmates were confined to county and city jails per day in 2015. The number of admissions to jail was almost 15 times the size of average daily population of the United States in 2015. Approximately 68% of jail inmates in 2015 were held for a felony offense, and the remaining 32% were held for either a misdemeanor (27%) offense or other (5%) offense (BJS, 2016).

In a study conducted by the U.S. Department of Justice (BJS, 2017), inmates were given the Kessler-6 (K6; Kessler et al., 2003), a nonspecific psychological distress scale to assess serious psychological distress among inmates within the 30 days prior to the survey. The Bureau of Justice Statistics' 2011 to 2012 National Inmate Survey (NIS-3) was conducted in 358 jails, totaling 61,351 jail inmates. Of the inmates surveyed, 26% of them reported experiences that met the threshold for serious psychological distress and 44% of inmates had been told in the past by a mental health professional that they had a

mental disorder. The percentage of inmates who met the threshold for serious psychological distress was five times greater than the general United States population (5%) or those with no criminal involvement in the last year (4%). Among the inmates who were told they had a mental disorder, the largest percentage of inmates (31%) reported that they had a major depressive disorder (BJS, 2017). Other mental disorders included bipolar disorder (25%), an anxiety disorder (18%), PTSD (16%), schizophrenia or other psychotic disorder (11%), or a personality disorder (13%).

Approximately 73% of inmates who met the threshold for serious psychological distress reported that they had received some form of mental health treatment in their lifetime, including psychotropic medication and counseling (BJS, 2017). About 43% of inmates indicated that they had stayed overnight in a psychiatric hospital, 62% indicated that they had taken psychotropic medication, and 55% reported a history of receiving counseling. Of those inmates told they had a mental disorder, 90% reported that they received mental health treatment during their lifetime, including 51% who reportedly stayed overnight in a psychiatric hospital, 80% who had received psychotropic medication, and 74% who had received counseling. Of the inmates who received mental health treatment since admission to jail, 30% reported received psychotropic medication, 18% received counseling, and 13% received both psychotropic medication and counseling (BJS, 2017).

A larger percentage of females (32%) than males (26%) met the threshold for serious psychological distress (BJS, 2017). Likewise, females (68%) were more likely than males (41%) to be told that they had a mental disorder. Approximately 42% of

inmates ages 18 to 24 met the threshold for serious psychological distress, compared to those ages 35 to 44 (44%), ages 45 to 54 (48%), and ages 55 to 64 (50%; BJS, 2017).

Inmates who had multiple arrests were more likely to have been told they had a mental disorder (BJS, 2017). More than half (56%) of inmates who had been arrested 11 times or more had been told they had a mental disorder, compared to 31% of inmates with one arrest. Inmates with no prior incarceration (35%) were less likely than inmates with any prior incarceration (41% to 54%) to have been told they had a mental disorder. More than half (54%) of inmates incarcerated for more than five years had been told they had a mental disorder (BJS, 2017).

A larger percentage of inmates incarcerated for a violent offense (29%) met the threshold for serious psychological distress compared to those incarcerated for a property offense (27%), a drug offense (25%), a driving under the influence (DUI) charge (24%), or other public order offense (26%; BJS, 2017). Of those inmates who met the threshold for serious psychological distress or told they had a mental disorder, 10% were written up for or charged with assault while incarcerated. This is compared to inmates with no indicator of a mental health problem (4%), who were written up for or charged with assault while incarcerated.

Peterson, Skeem, Kennealy, Bray, and Zvonkovic (2014) reported that crimes are rarely directly motivated by mental health symptoms. Of the 429 crimes coded in their study, 4% were directly related to psychosis, 3% were directly related to depression, and 10% were directly related to a bipolar disorder. Peterson et al. (2014) found that 38% of the offenders with at least one crime directly motivated by their symptoms also committed at least one crime that was independent of their mental health symptoms. It is

likely that the relationship between mental health symptoms and criminal behavior varies over time within an offender. Thus, it is important to look at various factors related to the crime rather than solely a mental health diagnosis.

There are a number of risk factors that influence the likelihood that a mentally ill individual will become incarcerated at some point in his or her life. Ditton (1999) found that inmates diagnosed with mental illness reported at least three prior sentences and were more likely to violently recidivate than other inmates. Those with mental illness reported that they were not employed a month prior to arrest and 20% reported that their income was obtained from illegal sources. Additionally, Ditton (1999) found that homelessness is more prevalent among mentally ill offenders than the general population. In fact, 30% of inmates reported a period of homelessness during the year preceding arrest. Family history of incarceration and drug and alcohol use by a parent or guardian were prevalent among mentally ill offenders (Ditton, 1999). The mentally ill are more likely to be under the influence of drugs or alcohol while committing an offense. Additionally, mentally ill offenders reported negative life experiences related to drinking, including loss of job and at least one stay in a detoxification unit. Rates of physical and sexual abuse are also higher in mentally ill offenders, with females over twice as likely as males to be abused.

To fail on probation or parole means to violate the terms of probation or parole, leading to revocation of the community term and placement in jail or prison. The lack of community support systems and treatment leads to and perpetuates the mentally ill population within the criminal justice system (Lamb & Weinberger, 2004). Of those offenders on probation, approximately 547,800 had a mental illness (Ditton, 1999).



Those diagnosed with a mental illness are twice as likely to fail on probation or parole compared to those without a diagnosis of mental illness (Skeem & Loudon, 2006).

### **Diversion Programs**

Prior to 1989, traditional courts addressed the charges of the offender, but not the underlying problems, such as mental illness or substance abuse (Winick, 2002). Thus, individuals who had mental illness or substance abuse disorder often repeatedly required judicial intervention, usually in the form of incarceration. Traditional court judges lacked the expertise needed to practice with special populations and did not have access to treatment or social services needed to address the problems faced by these individuals. In response to these concerns, the courts decided that they needed to develop a new approach to problem-solving. From this, the “problem-solving” or “specialty court” movement began.

Throughout the United States, there are more than 2,500 specialty courts in operation (Boza, 2007). These courts allow offenders to live in the community as long as they adhere to specific probation requirements. Drug courts were the first widely recognized specialty court initiative. Drug courts provide diversion for substance-abusing offenders. Diversion is a program in the criminal justice system designed to enable offenders to avoid criminal charges and a criminal record. The key components of drug court include ongoing status hearings with the judge, compliance with and completion of drug abuse treatment, random weekly drug screens, punishment for program infractions, and reinforcement for program achievements (Boza, 2007).

Following the drug court initiative, the mental health court (MHC) movement began in 1997 (Boza, 2007). It was developed to divert defendants with mental illness or

developmental disabilities into one court to develop an appropriate and effective treatment plan. The focus was to be on mental illness rather than criminality. In comparison to traditional courts, MHCs have therapeutic goals, such as increasing adherence to treatment and decreasing involvement in the criminal justice system (McNiel & Binder, 2007). MHC has the ability to make more efficient use of existing resources in the community and link mentally ill offenders to adequate services. All of this can be achieved while protecting the rights of mentally ill offenders.

There are several commonalities between MHC and drug court, as described by Moore and Hiday (2006). MHC and drug courts share common goals, which include reducing criminal recidivism and increasing community-based treatment for the participants. Both courts hold the individual accountable through the power of the judiciary process and both rely on a multi-disciplinary team, who include legal and mental health professionals, to administer the diversion program. Additionally, both programs are voluntary, with the defendant agreeing to comply with probation and treatment requirements. Like drug court, MHC has a specialty docket for mentally ill defendants, a dedicated judge, dedicated prosecution and defense, monitoring by the court, an agreement to dismiss charges or avoid incarceration, and the use of sanctions to enforce compliance with probation requirements.

Studies of sanctions in MHCs rely on the court officials' impressions of how and what sanctions are imposed for noncompliance with program requirements, which is not objective (Moore and Hiday, 2006). It is useful to first examine the drug court literature about sanctions and rewards to identify critical issues that might offer insight into how sanctions and rewards are used in MHC.

In drug courts, sanctions include fines, short-term incarceration, community service hours, or termination from the program (Callahan, Steadman, Tillman, & Vesselinov, 2013). Rewards in drug court most often take the form of verbal encouragement by the judge, applause from the courtroom audience, decreased supervision and drug testing, and treatment phase advancement. Such rewards are intermittent, less specific, not immediately experienced by the participant, and based on subjective evaluation of a participant's progress in treatment. In drug court, rewards do not typically carry the same weight as the corresponding sanctions and thus may not be as effective in increasing compliance with program requirements. The systems of reinforcement employed by drug courts may not have the impact on participants' motivation, behavior, and outcomes that they have the potential to achieve.

In MHC, the judge is more likely to adjust services rather than issue a sanction. The most frequently used sanctions reported by MHC participants include attending MHC hearings more frequently, participation in community service, meeting with their doctors and probation officers more often, receiving a lecture from the judge, and losing privileges (Callahan et al., 2013). MHC participants who have a drug-related charge, self-report using drugs during participation in MHC, and those with a co-occurring diagnosis are more likely to receive a jail sanction. Likewise, these participants are most likely to be terminated from MHC probation for non-compliance. Jail is used as a last resort for heavy substance abuse, constant failure to comply with program requirements, and absconding. In a study conducted by Callahan et al. (2013), 447 MHC participants were surveyed. The most common incentive noted by participants was receiving a positive report from the MHC judge (78.2%) or their probation officer and case manager (69.3%).

It is also common for diversion courts to have a congratulatory announcement by the judge in open court or a graduation ceremony to as a reward and to acknowledge that participants have successfully completed the MHC requirements (Griffin, Steadman, & Petrila, 2002).

Most MHCs have more than one way to handle criminal charges to mandate treatment. Pre-plea, post-plea, and probation-based statuses are used to determine how the charges will be disposed of during and after MHC (Griffin et al., 2002). In pre-plea cases, charges are deferred, meaning the defendant can serve the remainder of his or her sentence in the community, and the charges are dismissed after the completion of MHC. Deferring a sentence means that the defendant's jail sentence does not need to be served as long as the individual is compliant with probation and does not commit another crime during the term of the sentence. Adjudication occurs in post-plea cases, but the sentence is deferred. Probation-based cases include a conviction with probation and a suspended or deferred jail sentence. MHC uses the dismissal of current legal charges as an incentive to participate in community treatment and avoid re-offending. The duration of MHC treatment is determined by the maximum sentence allowed for misdemeanor cases.

### **Mental Health Court Supervision**

There are five critical domains that effect MHC participation (Peters & Osher, 2004). These include severity of mental illness, severity of substance use disorder, severity of criminal charges and history, motivation for recovery and change, and program resources (e.g., assertive community treatment case management, medication management, therapy, appropriate living arrangements, and family support; Lamb & Weinberger, 2004). Each domain should to be taken into consideration when determining

if the offender is appropriate for acceptance into MHC. Screening for MHC should be completed as early as possible so impairment in functioning and suitability for the program can be determined. If appropriate, timely referrals should be made to mental health services in the community.

Conditions of probation within MHC typically include regular reporting to MHC staff or to the court so progress can be monitored and any problems can be addressed (Lamb & Weinberger, 2004). Status hearings, which are held weekly, are a good time to recognize and reward changes in behavior. These changes in behavior can include attendance at treatment activities (e.g., therapy, day programs, case management, and therapy), improvements in personal hygiene, increased periods of drug and alcohol abstinence, and involvement in vocational training.

MHC staff collaborates with community treatment providers to implement therapeutic intervention, including medication management, therapy, substance abuse treatment, housing, job training, and social skills training (Watson, Hanrahan, Luchins, & Lurigio, 2001). If defendants are agreeable to participating in treatment, their jail sentence can be deferred. This means that the defendant can serve the remainder of his or her sentence in the community.

MHC staff work with defendants in a collaborative effort to develop a treatment plan to address the needs of the defendants (Lamb & Weinberger, 2004). Because it is a collaborative effort, there must be a balance between the individual's needs, the MHC staff's perception of what is needed for the individual, and public safety when the individual returns to the community. For instance, the severity of the individual's mental

illness and inclination to participate in criminal behavior must be taken into account regarding the risk he or she poses to the community.

Medication monitoring and drug testing are both required in MHC (Lamb & Weinberger, 2004). If an individual is not already prescribed medication, an initial psychiatric evaluation is completed and regularly scheduled follow-up appointments should be attended to remain in compliance with MHC requirements. Routine and random drug screens are typically required two times during each week during the early phases of probation. The number of required drug screens can increase or decrease based on compliance and substance use throughout the probationary period (Lamb & Weinberger, 2004).

Living arrangements for mentally ill offenders should be supportive and structured to meet the needs of the individual (Lamb & Weinberger, 2004). Sometimes the living arrangement can be provided by family members. However, there are many circumstances when an individual's living arrangement is better suited for outside the family's home. In this case, an individual could live in a group home, which provides staff supervision, medication administered by staff, enforced curfews, and therapeutic activities to keep the individual busy throughout the day. Even if it is not possible to place the individual with family, it is still important to establish if the family is supportive.

### **Mental Health Court Effectiveness**

MHC staff links participants with resources based on needs and supports them throughout the process. Moore and Hiday (2006) compared 82 MHC participants with 183 traditional court participants, focusing on recidivism, probation completion status,

prior criminal record, jail time served, and severity of arrest offense. Using a multivariate model, Moore and Hiday (2006) found that MHCs reduce the number of new arrests and the severity of such re-arrests among mental ill offenders. In addition, participants who completed MHC probation produced even fewer re-arrests compared to those who did not complete probation.

Because MHC participants had support and access to treatment services, those who were successful consistently complied with their treatment for a minimum of six months (Moore & Hiday, 2006). On the other hand, participants in traditional court were unlikely to connect to treatment and services because they did not have access to resources and treatment options that they would have received in MHC. Likewise, participants did not have the structure, monitoring, support, and encouragement that was afforded to those in MHC.

Using thematic analysis, Canada and Gunn (2013) transcribed data to explore the various processes and factors that facilitate change as identified by 80 MHC participants. Data were coded as themes if participants discussed the component as being part of their personal change. The results of the thematic analysis suggest that it is likely that personal change results from the interplay of multiple factors or processes. According to participants, the structure of MHC, including accountability for their actions, is important in promoting change and positive outcomes (Canada & Gunn, 2013). Structure and accountability mean being required to adhere to a schedule of activities or services, report to authority figures on progress, knowing there are expectations of responsibility, and there are consequences if the expectations are not upheld. Specifically, structural features of MHC (e.g., scheduling, requirements, policies) and accountability (e.g., having to be

places at a certain time, fulfilling court expectations, providing random urine drug screens) were described as features of MHC that assist participants in prompting personal change. Structure and accountability appear to influence change in behavior through judicial leverage (e.g., legal sanctions) and instilling self-regulatory behavior.

Participants perceived supportive services as a way to enable and promote individual change (Canada & Gunn, 2013). MHC participation facilitates extensive support for participants when needed. Social support within the context of treatment (e.g., therapy), support from MHC staff, and informal peer support groups appear to help participants manage symptoms. Family members, peers, and friends who provide support are also important for client change.

Furthermore, Canada and Gunn (2013) found that participants identified aspects of treatment, including services coordinated by, provided by, or accessed through MHC, as central to prompting positive outcomes. The MHC offered access to treatment and services that participants were unable to utilize prior to MHC participation because they were uninsured, underinsured, treatment providers did not have available beds for treatment, or the individuals were unaware of service and treatment options. Participants reported multiple benefits of having a team of people who assist in treatment and toward positive outcomes. Participants reported that they received increased access to treatment through MHC staff's connections to community treatment providers, funding, and advocacy.

McNiel and Binder (2007) reviewed administrative databases associated with county court and jail systems, studying 170 participants who had data including entering MHC and at least six months of follow-up data. MHC participants showed a longer time



without any new charges or new charges for violent crimes compared with similar individuals who did not participate in the program. Further, MHC participants maintained reduced recidivism even after they were no longer under the supervision of the court. By 18 months, the risk of recidivism by MHC graduates was 34 out of 100, compared to 56 out of 100 for comparable persons not in MHC.

Burns, Hiday, and Ray (2013) used MHC administrative data, matched with criminal data, for all participants. Data were collected at two years prior to MHC entry, during MHC, and two years after MHC exit (e.g., graduation, opt-out, or termination from the program). Both re-arrest and post-exit jail days were used as measures of criminal recidivism. They found that participation in MHC reduced criminal recidivism, even two years after exiting the program.

The results are related to the participants' criminal history, time spent in MHC, and graduation as the main influences on recidivism (Burns et al., 2013). Increasing compliance with probation requirements increases the likelihood of completing MHC and decreasing the rate of recidivism. Changes in offenders' behaviors is necessary to comply with MHC probation requirements. These changes in behavior can include attendance at treatment activities (e.g., therapy, day programs, case management, and therapy), improvements in personal hygiene, increased periods of drug and alcohol abstinence, and involvement in vocational training. One way to modify behavior is to utilize applied behavior analysis.

### **Applied Behavior Analysis Basics**

Behavior is defined as anything an individual does when interacting with the physical environment (Skinner, 1938). Applied behavior analysis, previously called

behavior modification, is based on the premise that behavior is a function of the environment (Kazdin, 2001). The emphasis is on the function of observable, measurable behaviors. The consequences of a behavior determine the likelihood and frequency of future occurrence. In applied settings, behavioral programs rely heavily on the principles of operant conditioning.

Operant conditioning refers to the process and effects of consequences on behavior. A functional consequence is a stimulus change that follows a given behavior, altering the frequency of that type of behavior in the future (Cooper, Heron, & Heward, 2007). Operant conditioning does not require an individual's awareness. That is, behavior is modified by its consequences regardless of whether the individual is aware that his or her behavior is being reinforced or punished.

Developing effective programs depends on understanding the influences of antecedents and consequences and how they can be used to promote, develop, and maintain behavior (Kazdin, 2001). The initial events, stimuli, and states of the individual influence subsequent behavior and thus should be considered. Understanding the relations systematically can assist in intervening to change behavior.

The contingencies of reinforcement refer to the relationship between behaviors and the environmental events that influence behavior (Kazdin, 2001). The three components of a contingency include antecedents, behaviors, and consequences. An ongoing sequence of antecedents, behaviors, and consequences can occur.

Antecedents refer to stimuli, settings, and contexts that occur before and influence behaviors (Kazdin, 2001). Antecedents are critical and influence behavior. The context or circumstances form part of the antecedent event and may change how individuals

respond. There are three types of antecedents, which include setting events, prompts, and discriminative stimuli. Antecedents are important as they influence the occurrence or absence of behaviors.

Behaviors are the acts themselves, which are the focus of an intervention. Behavior change is achieved by identifying the target behavior that needs to be developed (Kazdin, 2001). Once the target behavior is identified, a plan is often established to modify it systematically.

Consequences are the events that follow a behavior and may include influences that increase, decrease, or have no impact on the behavior of an individual. Consequences affect only future behavior under certain stimulus conditions (Cooper et al., 2007). For a consequence to change a target behavior, it must be contingent on the occurrence of that behavior (Kazdin, 2001). A consequence is contingent when it is delivered only after the target behavior is performed. The relationship between behavior and consequences are described by the concepts of reinforcement and punishment.

Reinforcement, whether positive or negative, increases a target behavior. Positive reinforcement means adding or administering a desired contingency after a target behavior is performed, whereas negative reinforcement means removing an aversive contingency after a target behavior has been performed (Trotman & Taxman, 2011). In general, the reinforcement will be more effective if the contingency immediately follows the target behavior, the magnitude of the reinforcement is large, occurrence is consistent, and there is no reinforcement of non-target behaviors.

Negative reinforcement always refers to an increase in behavior. It requires an ongoing aversive event or stimulus that can be removed or terminated after a specific

response or behavior is performed (Kazdin, 2001). Many behaviors can be acquired and maintained using negative reinforcement, which enables an individual to interact appropriately with his or her environment (Iwata & Smith, 2007). Factors that determine if a negative reinforcement contingency will be effective in changing behavior include the strength of the contingency and the presence of competing contingencies.

Negative reinforcement and punishment are often confused. Unlike negative reinforcement, which increases behavior, punishments decrease the likelihood of an unwanted response or behavior (Kazdin, 2001). Positive punishment involves the application of something aversive to the individual, and negative punishment involves the removal of a desired stimulus or event.

A schedule of reinforcement is a rule that describes how often reinforcement is applied (Cooper et al., 2007). In other words, it is the relationship between responses and the delivery of the reinforcer. Each schedule can be expected to have predictable effects on one or more dimensions of behavior. There are two types of reinforcement schedule contingencies, ratio and interval (Austin & Carr, 2000). Ratio refers to the number of responses that occur before the delivery of a reinforcer (Austin & Carr, 2000). An interval contingency refers to the passage of intervals of time before the delivery of a reinforcer. The particular arrangement of ratio and interval contingences can affect the response rates and the pattern of responses in relation to the passage of time.

Various schedules of reinforcement have been used in the treatment of behavior. In a fixed ratio (FR) schedule, reinforcers are contingent on every pre-specified response (e.g., FR3 is every third response). In a variable ratio (VR) schedule, reinforcers are contingent on a variable number of responses (e.g., VR3 is an average of every three

responses). In a fixed interval (FI) schedule, reinforcers are contingent on the first response following a fixed time interval. In a variable interval (VI) schedule, reinforcers are contingent on the first response following a variable interval of time.

### **Contingency Management in Diversion Programs**

Behavior can be shaped through contingency management, an applied behavior analysis term, which refers to the planned pairing of behavior with a consequence (Hall, Prendergast, Roll, & Warda, 2009). Contingency management uses the principles of operant conditioning and can be an incentive-based intervention designed to alter an individual's behavior by systematically dispensing rewards for behavior changes, or it can be a punishment-based system designed to decrease certain behaviors through the application of an aversive consequence. A person is more likely to continue certain behaviors if he or she receives positive or negative reinforcement for those behaviors (Hall et al., 2009). Behaviors that receive punishment extinguish, especially if the individual replaces those problematic behaviors with appropriate behaviors that are reinforced.

Contingency management has been shown to be effective in targeting a variety of behaviors, including substance use behaviors, psychiatric symptoms, and behavioral compliance with drug court probation. Petry, Alessi, and Rash (2013) studied 393 participants with psychiatric symptoms and co-occurring cocaine dependency in outpatient substance abuse treatment clinics. Participants were randomly assigned to a standard care group, which involved intensive outpatient treatment, and contingency management groups, which involved receiving reinforcers contingent upon drug abstinence and completion of treatment-related activities. The monetary reinforcement

ranged from \$80 to \$882. Petry et al. (2013) found that contingency management significantly reduced psychiatric symptoms of cocaine-dependent patients compared to standard care. More specifically, indices of depression, hostility, interpersonal sensitivity, phobic anxiety, and psychotic symptoms were reduced. Further, this study found that the effects of contingency management in reducing psychiatric symptoms are mediated by reductions in drug use.

Contingency management can be used in probation environments as a tool to increase behavioral compliance. Trotman and Taxman (2011) reviewed how a contingency management program was integrated into a group within a community supervision setting. Participants were able to receive rewards for achieving abstinence from drug use and attaining previously set goals. The treatment group was comprised of 85 participants, who received an introduction session, at least seven sessions of contingency management goal-setting groups, 18 sessions of cognitive-behavioral group treatment, and six sessions of a social network group. With the use of contingency management, probation sentence reductions significantly increased attendance and decreased probation violations and arrests (Trotman & Taxman, 2011). Those actively engaged with contingency management showed fewer violent crimes overall and improved social adjustment. In substance abuse settings, contingency management focuses mainly on reinforcement- or incentive-based strategies.

Marlowe et al. (2008) evaluated a contingency management program in a drug court, in which gift certificates for compliance were delivered at four- and six-week intervals to 269 drug court participants. No main effects of contingency management

were detected, which Marlowe et al. (2008) attribute to the intensive punishments already used in drug court and the low rate of reinforcements used.

Further, Prendergrast et al. (2008) examined whether outcomes in drug court would be improved by augmenting the material reinforcers that were available to participants for accomplishments in the program (e.g., negative drug screens and attending treatment appointments). The study was comprised of 163 participants, who were assigned to one of two treatment conditions of a contingency management program, and their progress was tracked for 26 weeks. Prendergrast et al. (2008) compared an escalating schedule of reinforcement to a non-escalating schedule that provided higher magnitude reinforcers from the outset of treatment and decreased over time. There were no significant differences in the outcomes between those who received reinforcement and those who did not receive reinforcement (Prendergast et al., 2008). Those who received positive reinforcement showed a trend toward poorer performance. This is likely due to the influence of the judge within the courtroom, who has a stronger impact on drug court clients' attitudes, substance use behaviors, and other outcomes than the low-value vouchers awarded to the experimental group.

Contingency management procedures in diversion programs often rely on reinforcement rather than punishment, which is a goal of MHC. There is reluctance to punish behavior that is viewed as a manifestation of an individual's mental health symptoms (Trotman & Taxman, 2011). Typically, cash vouchers or payments can be used to purchase goods or services. Individuals can additionally receive an increase in privileges. Although these contingency management programs have sometimes been

demonstrated to be effective, these types of systems have the disadvantage of up-front costs, to which MHCs may not have access.

Voucher-based reinforcement therapy (VBRT) is a procedure in which participants receive vouchers for negative drug screens that indicate no recent drug use or for the performance of other behaviors (Prendergrast et al., 2008). In VBRT, vouchers are withheld if the drug screen is positive, suggestive that the participant has recently used illicit drugs, or other associated behaviors are not performed. Once a voucher is earned, it can be exchanged for gift cards, goods, or services that are related to abstinence from illicit drugs and alcohol, such as groceries, gasoline, or movie tickets. VBRT was shown to initiate and sustain long periods of drug and alcohol abstinence.

Although contingency management and VBRT have shown to be effective, they are often not used due to vouchers or prizes being too costly (Roll, Chudzynski, & Richardson, 2005). In a 16-week cognitive behavioral therapy drug abuse treatment program, 93 participants were enrolled in a drug abstinence program, in which drug testing was conducted weekly to monitor progress. Roll et al. (2005) found that there are several low-cost sources that could be used as reinforcement and punishment that both clients and staff rated as most reinforcing. Incorporating activities, such as ceremonies recognizing a client's successful progression or completion of treatment, certificates of attendance, and vocational assistance sufficiently reinforced effectiveness in the program. Thus, using other sources of reinforcement that occur in the treatment environment can help reduce this cost. Additionally, the vouchers and prizes can be combined to reduce the overall cost of contingency management programs and, in turn, increase motivation for participants.



## **Motivation**

As described by Lamb and Weinberger (2004), mentally ill offenders often lack internal motivation or control to change their behavior. Thus, they need external control, support, and structure to be compliant and successful in treatment. In a study of 801 participants in two drug courts, program completion was predicted by client motivation (Cosden et al., 2006). External motivation, including motivation to avoid incarceration, appears to increase the likelihood that participants will stay in treatment longer (Lawental, McLellan, Grissom, Brill, & O'Brien, 1996).

Marshall and Hser (2002) compared three groups of substance abuse clients, who were either mandated to treatment from the criminal justice system, involved with the criminal justice system but whose treatment was not mandated, and clients who had no current criminal justice contact. Results suggest that individuals who enter community-based treatment tend to have higher levels of internal motivation for treatment than offenders participating in court-based program. All of these individuals are additionally externally motivated to enter treatment to avoid further criminal action (e.g., jail; Marshall & Hser, 2002).

Self-Determination Theory (SDT) views motivation as coming from internal and external sources. Individuals have different amounts and different kinds of motivation. Individuals who are internally motivated see their behavior as stemming from their own choices, values, and interests. Intrinsic motivation involves activities that are done for their inherent satisfaction, which typically include play, exploration, sport, games, and activities done out of interest. Each individual is intrinsically motivated for some activities depending on the situation, contextual factors, and culture. Individuals perceive

external sources as initiating, pressuring, or coercing their actions. It is also possible that individuals perform extrinsically motivated behaviors with an attitude of willingness and inner acceptance of the value or utility of a particular task.

SDT maintains that the effects of goal pursuit and attainment are directly related to the degree to which people are able to satisfy their basic psychological needs (Ryan & Deci, 2000). Reinforcing events change response rates because they satisfy physiological needs (Ryan & Deci, 2017). Conditions that support an individual's basic psychological needs for autonomy, competence, and relatedness foster the most volitional and high-quality forms of motivation and engagement in activities.

Autonomy is the need to self-regulate one's experiences and actions (Ryan & Deci, 2000). An individual's behaviors are congruent with his or her interests and values. Only some behaviors are autonomous while others are regulated by external forces. SDT posits that competence is a desire to feel effective and masterful in important aspects of life. Relatedness is the feeling of being socially connected and a sense of belonging among others.

SDT considers the baseline of behaviors as intrinsically motivated and reinforcements are extrinsic motivation (Ryan & Deci, 2017). When reinforcers are added to baseline-level responding, the amount of responding increases. When the reinforcers are removed, responding returns to baseline levels. Indeed, rewards can have positive motivational functions, especially in areas in which behavior is not intrinsically motivating (Ryan & Deci, 2017). Externally administered rewards and contingences can signal competence and value, and they can be a form of positive feedback. However, behaving a certain way to get a positive or desired outcome can diminish autonomy and

undermine the individual's sense of autonomy. If an individual is engaging in an activity for the rewards, he or she sees the rewards as controlling his or her behavior rather than engaging in the activity for the inherent satisfaction.

### **Summary and Purpose**

Mentally ill offenders are disproportionately represented in the criminal justice system with approximately 26% of male inmates and 32% of female inmates diagnosed with a mental illness (BJS, 2017). Diversion programs, such as drug court and MHC, have been developed as a way to divert inmates from jail and into the community. Sanctions and incentives are elements of both courts, and they are used as ways to modify target behaviors.

Participants who completed MHC successfully and graduated from the program had a re-arrest rate one-fourth that of participants in traditional court (McNiel & Binder, 2007). To successfully complete MHC probation, individuals must remain compliant for most or all of their MHC probation. Compliance might be enhanced using sanctions and incentives using applied behavior analysis principles.

The use of sanctions and, more often, incentives in MHC is a core judicial tool to achieve program compliance. Rather than using punishment, MHC strives to use incentives as a way to change behavior. Although a brief jail stay may be an effective deterrence strategy, it comes with other costs (e.g., financial costs, disruption of treatment, loss of housing and employment). In turn, these costs make program adherence more challenging for participants. Developing appropriate incentives can enhance compliance with court requirements.

Incentives currently used in MHC include verbal praise, applause, gift cards, and reduced supervision. In a study conducted by Callahan et al. (2013), the most common incentive reported was receiving a positive report from the MHC judge (78.2%) or their probation officer (69.3%). Apart from this study, there are no known studies examining the use of incentives and reinforcements for behavioral changes in MHC. The current study will address this gap in the literature.

The current study will examine whether a negative reinforcement voucher-based contingency management intervention will improve the number of weeks compliant on MHC probation for participants diagnosed with a mental health disorder. It will also examine whether participants are more internally motivated or externally motivated by the vouchers to comply with MHC probation requirements.

First, it was hypothesized that participants who receive the voucher, which allowed participants to miss court dates for compliance with court orders, will remain compliant on MHC probation for more weeks than participants who do not receive the voucher. Second, it was hypothesized that participants, regardless of treatment condition, will be more externally motivated than internally motivated to comply with MHC probation requirements.

## Method

### Study Setting

This study took place in a MHC in a Southern metropolitan city. Participants met criteria for a mental disorder as defined by the current *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5, American Psychiatric Association, 2013). Individuals with co-occurring substance use disorders were also accepted where the mental health diagnosis was primary. If the substance use disorder was primary, the participant was likely more appropriate to be referred to drug court.

MHCs are similar, but policies and procedures differ between counties. To be considered for the particular MHC under study, a defendant must be 18 years old and charged with, convicted of, or on probation for a misdemeanor or felony offense where the behavior that led to the offense was connected to a mental illness. Defendants with charges of domestic violence, child or elder abuse, weapon offenses, or other serious violent offenses are not eligible for MHC without the District Attorney's consent. Defendants with convictions of murder or a sex offense are not eligible for MHC under any circumstances.

Participation in MHC is considered voluntary and the defendant must be willing to participate in community-based treatment. The defendant must be willing to sign a release of information for details pertaining to his or her mental health treatment, substance use, legal status, and history. This information is shared with the MHC staff team as needed. Acceptance into MHC must be agreed upon by the MHC legal and treatment team, which includes the judge, defense attorney, the Assistant District Attorney, and the probation officer.

The MHC staff in the MHC under study is comprised of a judge, one clinical director, and two client specialists. The duties of the clinical director include assessment of defendants to determine MHC eligibility and establishment of a release plan. The client specialists work individually with assigned MHC participants to develop treatment plans, coordinate treatment referrals, monitor the progress of participants, submit progress reports to the judge, and attend status hearings to provide information requested by the Court.

MHC participants in the MHC under study are required to attend court once per week for court status hearings for the duration of their probation (e.g., 12 months). MHC participants are required to sign and adhere to a Probation Contract, which outlines the defendant's requirements while on probation. The MHC Probation Contract includes rules with which the defendant must comply.

The Probation Contract for the MHC under study indicates that any reports made to the MHC and its staff must be truthful. The defendant must inform MHC staff of his or her new address and telephone number prior to relocating and changing such information. The defendant must allow a member of the MHC staff to visit him or her at home or at his or her place of employment. He or she must obtain permission from a member of the MHC staff prior to leaving the county and/or the state. A defendant must report to the MHC office via telephone as directed by a member of the MHC staff.

Per the Probation Contract for the MHC under study, defendants are not to engage in any criminal activity and/or conduct contrary to good citizenship. They agree to report all new criminal charges placed against them, whether by summons, citation, or criminal warrant, to the MHC staff immediately. Defendants cannot carry any type or form of

weapon. He or she will refrain from the use of all alcohol and drugs, avoiding all areas where illicit drugs are present, and where alcohol is unlawfully being sold and/or used. Defendants must submit to drug screens if ordered to do so by the Court or if a member of the MHC determines that it is necessary after a review of the charges against them and/or by personal history. If the results of past history and/or the drug screen indicate a need for substance abuse treatment, the defendant will work with the MHC staff and a treatment provider to formulate a treatment plan that addresses the defendant's needs.

According to the Probation Contract for the MHC under study, all court costs and fines in the case must be paid, unless defendants are otherwise declared indigent in the eyes of the Court. Defendants must be compliant with any community service agency that the Court has deemed as responsible placement, and work willingly with the case management issued by that said agency. There is also an area in the Probation Contract for additional sanctions, which can be individualized for each defendant. This could include housing placements and restrictions, educational and vocational requirements, and psychiatric services when indicated.

### **Participants**

All defendants who were accepted into MHC were eligible to participate in the study. Exclusionary criteria for this study included having been a prior MHC participant and the lack of a paired participant in treatment conditions. A total of 18 participants were excluded from the study because they were unable to be paired based on their demographics. Although data collection for those 18 participants were started, complete data were not collected when it was clear a match was not available. Therefore, those data were not analyzed.

Participants in the treatment condition were paired with participants in the control condition based on gender, age plus or minus five years, and mental health diagnosis. Participants were assigned to one of the two experimental conditions from study entry. When a participant entered the study and could be paired with another participant based on demographics, he or she was assigned to the other condition. For example, if Participant A entered the study and was assigned to the experimental group, the next participant who could be paired with Participant A based on demographics would be assigned to the control group. Data were collected continuously for 24 weeks from when the participant entered the study.

The sample for this study consisted of 22 MHC participants. The 11 participants (50.0%) given the voucher which permits them to miss one court date were considered the experimental group and the 11 participants who received treatment as usual on MHC probation were considered the control group.

Results of an independent samples *t*-test indicated no significant differences between the experimental and control group for the age of participants,  $t(20) = .246, p = .81$ . There were 12 females and 10 males in the study sample. The mean age of the experimental group was 31.18 ( $SD = 7.15$ ) and the mean age of the control group was 30.45 ( $SD = 6.73$ ). Participants' mental health diagnoses included Bipolar and Related Disorders, Depressive Disorders, and Schizophrenia Spectrum and Other Psychotic Disorders. See Table 1 for more details. Participants' criminal legal charges varied greatly, ranging from person offenses (e.g., domestic assault), driving offenses (e.g., driving under the influence), property offenses (e.g., vandalism, theft), and drug offenses (e.g., drug paraphernalia).



Table 1

*Demographic Characteristics of Participants (n = 22)*

Characteristic	Experimental		Control	
	<i>n</i>	Percentage	<i>n</i>	Percentage
<b>Gender</b>				
Male	6	54.5%	6	54.5%
Female	5	45.5%	5	45.5%
<b>Race</b>				
Asian	1	9.1%	0	0.0%
Black/African American	4	36.4%	6	54.5%
White/Caucasian	6	54.5%	5	45.5%
<b>Ethnicity</b>				
Hispanic or Latino	1	9.1%	0	0.0%
Not Hispanic or Latino	10	90.9%	11	100.0%
<b>Mental Health Diagnosis</b>				
Unspecified Bipolar Disorder	4	36.4%	4	36.4%
Bipolar I Disorder	2	18.2%	2	18.2%
Major Depressive Disorder	2	18.2%	2	18.2%
Schizoaffective Disorder	1	9.1%	1	9.1%
Schizophrenia	1	9.1%	1	9.1%
Unspecified Schizophrenia Spectrum & Other Psychotic Disorder	1	9.1%	1	9.1%
<b>Additional Mental Health Diagnosis</b>				
Posttraumatic Stress Disorder	1	9.1%	0	0.0%
Borderline Personality Disorder	0	0.0%	1	9.1%

## Measures

**Demographics.** Questions on demographic characteristics included age, gender, ethnicity, race, mental health diagnoses, and current legal charges. See Appendix A for the demographic questionnaire.

**Number of weeks compliant.** The MHC clinical director tracked the number of weeks compliant in MHC for 24 weeks from study entry. MHC compliance included adhering to the probation guidelines established when the probation contract was developed and signed by the participant and the participant's assigned MHC client specialist.

**Voucher-Based Motivation Questionnaire (VBMQ).** The VBMQ is a direct measure of participants' motivation to participate in the voucher-based program, adapted from the Treatment Motivation Questionnaire (TMQ; Ryan, Plant, & O'Malley, 1995) by the primary investigator of this study. The TMQ was developed to assess reasons for entering and staying in treatment, and it attempts to measure SDT and internalization in motivation for therapy. The TMQ was analyzed in a principal components factor analysis using an item factor loading cutoff of 0.50 (Ryan et al., 1995). The factors were internally consistent with coefficient alpha levels ranging from 0.70 to 0.98.

The VBMQ was adapted from the TMQ by replacing the term "treatment" with "voucher-based program" throughout the questionnaire to reflect the voucher-based program under study; the remainder of the questionnaire remained the same. See Appendix B for the VBMQ. The VBMQ is a seven-item Likert-type scale comprised of 26 self-report questions that assess two motivation factors (e.g., Internal Reasons and External Reasons) and two other subscales (e.g., Help-Seeking and Confidence in the

voucher-based program). Participants rate each item between 1 (*not at all true*) and 7 (*very true*). An example of an Internal Reasons item of the VBMQ is, “I participated in the voucher-based program because I really want to make some changes in my life, and I thought this would help.” An example of an External Reasons item on the VBMQ is, “I participated in the voucher-based program because I was referred by the court.” The VBMQ has an internal consistency of .91.

### **Procedure**

The current study received Institutional Review Board (IRB) approval prior to the collection of data. Research staff (e.g., MHC client specialists, MHC clinical director) were trained to run the study by the primary investigator. The MHC client specialists described the study to all MHC participants willing to participate, obtained their Informed Consent to participate in the study, and filled out demographic information for each participant. See Appendix C for the Informed Consent document used in this study. Participants in MHC were reluctant to enter the study, even after reviewing the Informed Consent, due to paranoid thought processes about the legal system. Thus, it was difficult to get MHC participants to participate in the current study.

Participants started the study upon signing the Informed Consent to participate in the study and the MHC Probation Contract. See Appendix D for the MHC Probation Contract used in the MHC under study. If a MHC client is in an inpatient treatment facility for the first month of probation, his or her Probation Contract will not be signed until after completion of the program. Thus, these participants did not start the study until after completion of the inpatient treatment program. The voucher program occurred the

first 24 weeks of the participants' MHC probation. Participants were paired and assigned to one of two groups:

**Control group.** Participants in the control group received standard treatment of MHC with no additional intervention.

**Experimental group.** After two consecutive court status hearings, a voucher was given to participants who were compliant with all probation requirements. Compliance was defined as adhering to all of the MHC probation guidelines established when the MHC Probation Contract was developed and signed by the MHC participant and the MHC client specialist.

All vouchers used in the study were printed on yellow cardstock that measured 3.0" in height and 5.0" in width. The voucher was given to the participant at the second status hearing. Participants were able to use the voucher to miss their next scheduled court status hearing. For example, if participants were compliant for the first two court status hearings, they received the voucher at the second court status hearing to miss the third court status hearing. Compliance was tracked continuously across court status hearings, regardless of whether a voucher was awarded and used. MHC client specialists noted compliance, non-compliance, vouchers awarded, and vouchers used in all participants' court files and study tracking sheets. The number of weeks compliant was tracked even when the participant was not in court. If participants were non-compliant with MHC probation requirements, it was explained to them during their next court status hearing why they did not receive a voucher. They were subsequently required to maintain compliance for the next two consecutive weeks to receive another voucher.

After a participant in the experimental group completed the 24 weeks of the study, he or she was required to fill out the VBMQ. Participants in the control group did not complete the VBMQ.

None of the participants who were paired for the study withdrew from the study or had their sentence placed into effect, meaning that they would have to serve the remainder of their probation term in jail.

Integrity checks were conducted once per month by the primary investigator to ensure court staff were following procedures. See Appendix E for the integrity checklist. The MHC clinical director was trained to run integrity checks during the absence of the primary investigator. A checklist was developed and direct observation was conducted during court status hearings in which the study was being conducted. The observer collected treatment integrity data on each individual intervention component by rating whether the component was implemented as written. The treatment integrity level of this study was 100%.

## Results

The current analysis included data from baseline through the first 24 weeks of the intervention. SPSS version 25 was used to analyze the data. The socio-demographic data were evaluated through descriptive analyses such as frequency and mean. See Table 1 for additional information. The independent variable of interest was the treatment condition and the dependent variables of interest were the number of weeks compliant on MHC probation and external motivation. Independent samples *t*-tests and a paired samples *t*-test were used to test the hypotheses.

Based on the scoring for the TMQ (Ryan et al., 1995), the four subscale scores of the VBMQ were calculated by averaging the response for items in that subscale. External Reasons include items 3, 6, 10, and 12. Internal Reasons include items 1, 2, 4, 5, 7, 8, 9, 11, 15, 20, and 23. The Help-Seeking items include 17, 18, 19, 22, 25, and 26. The Confidence items include 13, 14, 16, 21, and 24. Of these, 13, 16, 21, and 24 were reverse scored before averaging it with other items in the subscale. To do that, the participant's responses were subtracted from 8. For example, a 3 becomes a 5. A higher score means more confidence in the voucher-based program. The Help-Seeking and Confidence subscales were not analyzed in this study.

A total of 65 vouchers were awarded to MHC participants for compliance with MHC probation requirements. The number of vouchers awarded ranged from 0 to 10 among the 11 participants in the experimental group, with an average of 5.90 ( $SD = 3.62$ ) vouchers awarded to participants.

The first hypothesis was that participants who received the voucher, which allowed participants to miss court dates for compliance with court orders, remained

compliant on MHC probation for more weeks than participants who did not receive the voucher. The results indicated that, on average, the control group was compliant one week longer than the experimental group. To test the difference, an independent samples *t*-test was used to determine if the difference in the number of weeks compliant in MHC compared to the control group was statistically significant. Results of the independent samples *t*-test showed that weeks of compliance were not statistically significant difference between the experimental group ( $M = 17.27, SD = 4.78$ ) and the control group ( $M = 18.27, SD = 3.50$ );  $t(20) = -0.56, p = .32$ . The participants who received the vouchers were not compliant more weeks than the participants who did not receive the vouchers. A priori sample size and power were calculated for an independent samples *t*-test with a small effect size ( $d = .24$ ) using G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007). A standard alpha value (alpha = .05) was used. See Table 2 for more details.

Table 2

*Sample differences for number of weeks compliant on MHC probation (n = 22)*

Measure	Experimental		Control		<i>t</i> (21)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Weeks of compliance	17.27	4.78	18.27	3.50	-0.56	.32	0.24

A paired comparison of the number of weeks compliant among the sample was explored to determine if there were any individual differences that impacted the results of this study. See Figure 1 for a visual comparison of the results. For pairs numbered 6 and 8, participants were compliant the same number of weeks in both conditions. For pairs 3, 5, 10, and 11, participants in the experimental group were compliant for more weeks than

those in the control group. However, only for pair 11 did there appear to be a large difference between the number of weeks compliant. These two participants were males diagnosed with Major Depressive Disorder.

For pairs 1, 2, 4, 7, and 9, participants in the control group were compliant for more weeks than those in the experimental group. Interestingly, all participants in these groups were female with a diagnosis with a mood component (e.g., Bipolar I Disorder, Unspecified Bipolar and Related Disorder, Schizoaffective Disorder). However, there only appeared to be a large difference between the number of weeks compliant for pair 9. These two participants were females diagnosed with Unspecified Bipolar and Related Disorder.

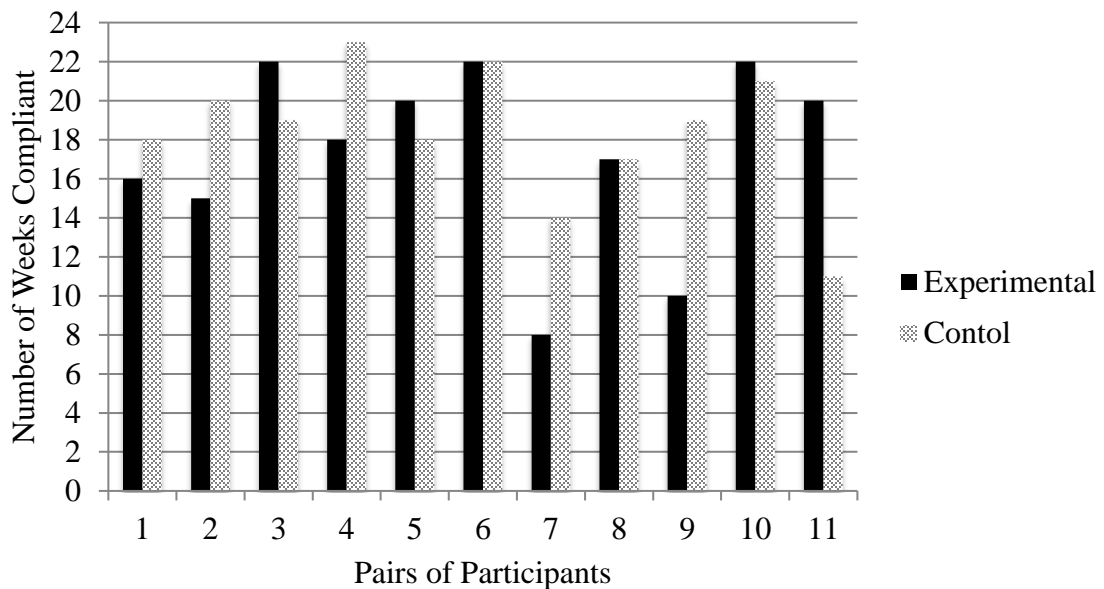


Figure 1. Paired comparisons of weeks compliant



The second hypothesis stated that participants in the experimental group would be more externally motivated than internally motivated to comply with MHC probation requirements. A paired-samples *t*-test was conducted to compare external motivation to internal motivation in experimental group as measured by the VBMQ. There was not a significant difference in the scores for external motivation ( $M = 4.75, SD = 0.72$ ) and internal motivation ( $M = 4.55, SD = 1.05$ );  $t(21) = 1.01, p = .326$ . These results suggest that participants were not more externally motivated than internally motivated to comply with MHC probation requirements. See Table 3 for more details.

Table 3

*Group difference between external and internal motivation (n = 11)*

Measure	<i>M</i>	<i>SD</i>	<i>t</i> (10)	<i>p</i>	Cohen's <i>d</i>
External Motivation	4.75	0.72	1.01	.326	0.22
Internal Motivation	4.55	1.05			

## Discussion

The current study examined whether a negative reinforcement voucher-based contingency management intervention improved the number of weeks compliant on MHC probation for participants diagnosed with a mental health disorder. It was hypothesized that participants who received the voucher, which allows participants to miss court dates for compliance with probation requirements, remained compliant on MHC probation for more weeks than participants who do not receive the voucher. This hypothesis was not supported as, on average, participants receiving the voucher were not compliant more weeks than those participants not receiving the vouchers. This suggests that the vouchers were not an appropriate incentive, on average, to enhance compliance with court requirements.

The foundation of MHC is that it uses incentives, rather than the sanctions used in drug courts, to change behaviors. Although it was hypothesized that the vouchers would be an incentive to increase compliance with court requirements, this study more aligns with the results of a study conducted by Prendergast et al. (2008), in which there was no significant differences in the outcomes between those who received reinforcement and those who did not receive reinforcement in a drug court. This is also supported by the results from a study conducted by Marlowe et al. (2008), in which a contingency management program in a drug court was evaluated, and no main effects were detected. Although many behaviors can be acquired and maintained using negative reinforcement, factors that determine if a negative reinforcement contingency will be effective in changing behavior include the strength of the contingency and the presence of competing contingencies (Iwata & Smith, 2007). Prior to implementing the voucher program, it was not determined what rewards were considered strong reinforcement for participants'

compliance on MHC probation. It is possible that other incentives could have worked to increase weeks compliant on MHC probation.

The second hypothesis under study stated that, regardless of condition, participants would be more externally motivated than internally motivated to comply with MHC probation requirements. Results indicate that there were no significant differences between external and internal motivation to comply with MHC probation requirements. These results are inconsistent with the current literature, which states that mentally ill offenders often lack internal motivation or control and thus need external control, support, and structure to be compliant and successful in treatment (Lamb & Weinberger, 2004). Self-Determination Theory considers the baseline of behaviors as intrinsically motivated and reinforcements as extrinsic motivation (Ryan & Deci, 2017).

Rewards can have positive motivational functions, especially in areas in which behavior is not intrinsically motivating (Ryan & Deci, 2017). Externally administered rewards and contingences can signal competence and value, and they can be a form of positive feedback.

It was not determined what external and internal rewards were effective for participants' compliance on MHC probation. Incentives currently used in MHC include verbal praise, applause, gift cards, and reduced supervision. In a study by Callahan et al. (2013), the most common incentive reported was receiving a positive report from the MHC judge (78.2%) or their probation officer (69.3%). It is possible that other incentives could have improved external motivation to comply with MHC probation requirements.

Further, it is possible that not requiring participants to attend court status hearings removed a powerful incentive to comply with MHC probation requirements. This aligns with the study conducted by Prendergast et al. (2008), in which those individuals who received positive reinforcement showed a trend toward poorer performance. This is likely due to the influence of the judge within the courtroom, who has a stronger impact on court clients' attitudes, substance use behaviors, and other outcomes than the vouchers awarded to the experimental group.

### **Limitations**

This study had several limitations. The amount of time (e.g., 24 weeks) in which data were collected for each participant was not representative of a full MHC probation sentence (i.e., 12 months). According to Moore and Hiday (2006), the full time on MHC probation rather than partial time (e.g., 6 months), makes the difference in reducing arrest rates. The amount of time on probation may also influence compliance with MHC probation requirements.

Another limitation was that there was not a survey conducted prior to this study to determine what incentives would be considered reinforcing for participants to comply with MHC probation requirements. According to Austin and Carr (2000), stimulus preference assessments are conducted by presenting available stimuli and observing for preference responding. It is important to offer a convincing representation of the stimuli with reinforcer for an individual. Because a stimulus preference assessment was not conducted prior to this study, it is unknown whether the incentives do not actually impact compliance or whether the vouchers were not a strong enough reinforcement for the participants to comply with MHC requirements. Another important aspect of successfully

using reinforcement is the immediacy of reinforcer contingent upon the desired behavior. In the current study, even though the participants were immediately awarded the voucher, participants had to wait one week to use the voucher to miss their next court status hearing.

Another limitation stems from the sample size. There were a total of 22 participants, which impacts the generalizability of the results and the power of the study. The current results may not be generalizable to all individuals participating in MHC probation.

### **Future Research**

Because incentives are a major foundation of MHC, it is important to conduct future research to determine what MHC participants deem rewarding and influential in remaining compliant on MHC probation. Future research should aim to address the limitations of this study, including having a larger sample size, longer amount of time for data collection, and determining appropriate incentives that would aid in increasing compliance on MHC probation.

## References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5<sup>th</sup> ed.). Arlington, VA: Author.
- Austin, J., & Carr, J. (2000). *Handbook of applied behavior analysis*. Reno, NV: Context Press.
- Boza, J. A. (2007). Benevolent behavior modification: Understanding the nature and limitations of problem-solving courts. *Widener Law Journal*, 17, 1-25.
- Bureau of Justice Statistics. (2016). *Jail inmates in 2015* (NCJ 250394). Washington, D.C.: U.S. Department of Justice. Retrieved from <http://www.bjs.gov/index.cfm?ty=pbdetail&iid=5872>.
- Bureau of Justice Statistics. (2017). *Indicators of mental health problems reported by prisoners and jail inmates, 2011-12* (NCJ 250612). Washington, D.C.: U.S. Department of Justice. Retrieved from <http://www.bjs.gov/index.cfm?ty=pbdetail&iid=5946>.
- Burns, P. J., Hiday, V. A., & Ray, B. (2013). Effectiveness two years postexit of a recently established mental health court. *American Behavioral Scientist*, 57, 189-208.
- Callahan, L., Steadman, H. J., Tillman, S., & Vesselinov, R. (2013). A multi-site study of the use of sanctions and incentives in mental health courts. *Law and Human Behavior*, 37, 1-9.
- Canada, K. E., & Gunn, A. J. (2013). What factors work in mental health court?: A consumer perspective. *Journal of Offender Rehabilitation*, 52, 311-337.

- Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis, second edition*. Upper Saddle River, NJ: Pearson Education, Inc.
- Ditton, P. M. (1999). *Mental health and treatment of inmates and probationers* (NCJ 174463). Washington, D.C.: U.S. Department of Justice. Retrieved from <http://www.bjs.gov/index.cfm?ty=pbdetail&iid=787>.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175-191.
- Griffin, P. A., Steadman, H. J., & Petrila, J. (2002). The use of criminal charges and sanctions in mental health courts. *Psychiatric Services*, *53*, 1285-1287.
- Hall, E. A., Prendergast, M. L., Roll, J. M., & Warda, U. (2009). Reinforcing abstinence and treatment participation among offenders in a drug diversion program: Are vouchers effective? *Criminal Justice and Behavior*, *36*, 935-953.
- Iwata, B. A., & Smith, R. G. (2007). Negative reinforcement. In J. Cooper, T. Heron, & W. Heward (Eds.), *Applied behavior analysis, second edition* (pp. 291-303). Upper Saddle River, NJ: Pearson.
- Kazdin, A. E. (2001). *Behavior modification in applied settings* (6<sup>th</sup> ed.). Belmont, CA: Wadsworth.
- Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., ... Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry*, *60*, 184-189.
- Lamb, H. R., & Weinberger, L. (2004). Mentally ill persons in the criminal justice system. *Psychiatric Quarterly*, *75*, 107-126.

- Lawental, E., McLellan, A. T., Grissom, G. R., Brill, P., & O'Brien, C. (1996). Coerced treatment for substance abuse problems detected through workplace urine surveillance: Is it effective? *Journal of Substance Abuse, 8*, 115-128.
- Marlowe, D. B., Festinger, D. S., Dugosh, K. L., Arabia, P. L., & Kirby, K. C. (2008). An effectiveness trial of contingency management in a felony preadjudication drug court. *Journal of Applied Behavioral Analysis, 41*, 565-577.
- Marshall, G. N., & Hser, Y. (2002). Characteristics of criminal justice and noncriminal justice clients receiving treatment for substance abuse. *Addictive Behaviors, 27*, 179-192.
- McNiel, D. E., & Binder, R. L. (2007). Effectiveness of a mental health court in reducing criminal recidivism and violence. *American Journal of Psychiatry, 164*, 1395-1403.
- Moore, M. E., & Hiday, V. A. (2006). Mental health court outcomes: A comparison of re-arrest and re-arrest severity between mental health court and traditional court participants. *Law and Human Behavior, 30*, 659-674.
- Peters, R. H., & Osher, F. C. (2004). *Co-occurring disorders and specialty courts* (2<sup>nd</sup> ed.). Delmar, NY: The National GAINS Center.
- Peterson, J. K., Skeem, J., Kennealy, P., Bray, B., & Zvonkovic, A. (2014). How often and how consistently do symptoms directly precede criminal behavior among offenders with mental illness? *Law and Human Behavior, 38*, 439-49.
- Petry, N. M., Alessi, S. M., & Rash, C. J. (2013). Contingency management treatment decrease psychiatric symptoms. *Journal of Counseling and Clinical Psychology, 81*, 926-931.



- Prendergast, M. L., Hall, E. A., Roll, J., & Warda, U. (2008). Use of vouchers to reinforce abstinence and positive behaviors among clients in a drug court treatment program. *Journal of Substance Abuse Treatment, 35*, 125-136.
- Roll, J. M., Chudzynski, J. E., & Richardson, G. (2005). Potential sources of reinforcement and punishment in a drug-free treatment clinic: Client and staff perceptions. *The American Journal of Drug and Alcohol Abuse, 1*, 21-33.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 23*, 54-63.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York, NY: The Guilford Press.
- Ryan, R. M., Plant, R. W., & O'Malley, S. (1995). Initial motivations for alcohol treatment: Relations with patient characteristics, treatment involvement, and dropout. *Addictive Behaviors, 20*, 279-297.
- Skeem, J. L., & Louden, J. E. (2006). Toward evidence-based practice for probationers and parolees mandated to mental health treatment. *Psychiatric Services, 57*, 333-342.
- Skinner, B. F. (1938). *The behavior of organisms*. Acton, MA: Copley.
- Steadman, H. J., & Naples, M. (2005). Assessing the effectiveness of jail diversion programs for persons with serious mental illness and co-occurring substance use disorders. *Behavioral Sciences and the Law, 23*, 163-170.
- Trotman, A. J., & Taxman, F. S. (2011). Implementation of a contingency management based intervention in a community supervision setting: Clinical issues and recommendations. *Journal of Offender Rehabilitation, 50*, 235-251.

- Watson, A., Hanrahan, P., Luchins, D., & Lurigio, A. (2001). Mental health courts and the complex issues of mentally ill offenders. *Psychiatric Services, 52*, 477-481.
- Winick, B. J. (2002). Therapeutic jurisprudence and problem solving courts. *Fordham Urban Law Journal, 30*, 1055-1103.

## APPENDIX A

### Demographics Questionnaire

1. What is your age? \_\_\_\_\_ years
2. What is your gender?
  - a. Male
  - b. Female
  - c. Other
3. What is your race?
  - a. American Indian / Native American
  - b. Asian
  - c. Black / African American
  - d. White / Caucasian
  - e. Pacific Islander
  - f. Other
4. What is your ethnicity?
  - a. Hispanic or Latino
  - b. Not Hispanic or Latino
  - c. Other
5. What is your current mental health diagnosis?  
\_\_\_\_\_  
\_\_\_\_\_
6. What are your current legal charges?  
\_\_\_\_\_  
\_\_\_\_\_

## APPENDIX B

### Voucher-Based Motivation Questionnaire

This questionnaire concerns people's reasons for participating in the voucher-based program and their feelings about the program. Different people have different reasons for entering the program, and we want to know how true each of these is for you. Please indicate how true each reason is for you, using the following scale:

1	2	3	4	5	6	7
not at all true			somewhat true			very true

#### **A. I participated in the voucher-based program because:**

- \_\_\_\_\_ 1. I really want to make some changes in my life, and I thought this would help.
- \_\_\_\_\_ 2. I wouldn't feel good about myself if I didn't participate in the program.
- \_\_\_\_\_ 3. I was referred by the court.
- \_\_\_\_\_ 4. I feel so guilty about my problem that I have to do something about it.
- \_\_\_\_\_ 5. It is important to me personally to solve my own problems.

#### **B. I remained compliant with my probation requirements because:**

- \_\_\_\_\_ 6. I will get in trouble if I don't.
- \_\_\_\_\_ 7. I will feel very bad about myself if I don't.
- \_\_\_\_\_ 8. I'll feel like a failure if I don't.
- \_\_\_\_\_ 9. I feel like it's a good way to help myself.
- \_\_\_\_\_ 10. I don't really feel like I have a choice about complying with probation requirements.
- \_\_\_\_\_ 11. I feel like it is in my best interests to complete probation.

**C. Rate each of the following in terms of how true each statement is for you:**

- \_\_\_\_\_ 12. I participated in the voucher-based program because I was under pressure to do it.
- \_\_\_\_\_ 13. I am not sure that the voucher-based program helped me.
- \_\_\_\_\_ 14. I am confident that the voucher-based program worked for me.
- \_\_\_\_\_ 15. I decided to participate in the voucher-based program because I was interested in getting help.
- \_\_\_\_\_ 16. I am not convinced that the program helped me stop prohibited behaviors.
- \_\_\_\_\_ 17. I want to openly relate to others in the court.
- \_\_\_\_\_ 18. I want to share some of my concerns and feelings with others.
- \_\_\_\_\_ 19. It was important for me to work closely with others in solving my problems.
- \_\_\_\_\_ 20. I am responsible for the choice of participating in the voucher-based program.
- \_\_\_\_\_ 21. I doubt that the voucher-based program helped solve my problems.
- \_\_\_\_\_ 22. I look forward to relating to others who have similar problems.
- \_\_\_\_\_ 23. I chose the voucher-based program because I think it is an opportunity for change.
- \_\_\_\_\_ 24. I am not very confident that I saw results from the voucher-based program.
- \_\_\_\_\_ 25. It will be a relief for me to share my concerns with other program participants.
- \_\_\_\_\_ 26. I accept the fact that I need some help and support from others to overcome my problem.

## APPENDIX C

### Informed Consent

**Project Title:** Use of Vouchers in Mental Health Court

**Investigator:** Michele Murdock, Department of Psychology,  
Western Kentucky University, (407) 252-0171

You are being asked to participate in a research project conducted through this Mental Health Court and Western Kentucky University. The University requires that you give your signed agreement to participate in this project.

**You must be 18 years old or older to participate in this research study.**

The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have. If you then decide to participate in the project, please sign this form in the presence of the person who explained the project to you. You should be given a copy of this form to keep.

1. **Nature and Purpose of the Project:** The purpose of this study is to look at the number of weeks people are compliant with mental health court probation requirements when they are given vouchers to miss court dates. Additionally, this study will examine if people's attitudes and thoughts are related to the number of weeks compliant.
2. **Explanation of Procedures:** You will be asked to complete a demographic questionnaire and the Attitudes and Thoughts of Earning a Voucher questionnaire. Your mental health diagnosis and current charges will be obtained from your assigned mental health court Client Specialist. Your name will not be attached to the data provided to the investigator. If you are compliant with your probation requirements for two weeks, you are eligible to receive a voucher to miss your next court date. With the voucher, you can miss the next court date if you remain compliant that week. Your compliance with mental health court probation requirements will be tracked for six months in this study.
3. **Discomfort and Risks:** There are no foreseeable risks associated with your participation in this research. *You are free to discontinue participation in the study at any time without penalty or loss of benefits provided by the court system, probation, or one time opportunities provided by this research study (i.e., voucher).* You may also freely decline to answer any of the questions asked of you.
4. **Benefits:** Your participation in this study does not guarantee any beneficial results. It is possible, however, to obtain a voucher to miss a court date depending on your compliance with probation requirements.
5. **Confidentiality:** The responses that you provide and participation in the study will be kept completely confidential. At no time will your name or any other identifying information be associated with any of the data provided to the investigator. At no time will any records

from the research study be shared with court files, documents, or proceeding. In addition, the investigator will never identify you personally in any report of this research. Although your individual results will not be made public (i.e., they will remain confidential), your data will be combined with the data of others and may be submitted for presentation at conventions and/or publication in scholarly journals.

6. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the Mental Health Court, probation, and/or Western Kentucky University. ***You are free to discontinue participation in the study at any time without penalty or loss of benefits provided by the court system, probation, or one time opportunities provided by this research study (i.e., voucher).***

*You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.*

I have read and understand the nature of this study and I agree to participate.

_____	(Print)	_____	_____
Name of Participant		Signature of Participant	Date
_____	(Print)	_____	_____
Name of Witness		Signature of Witness	Date

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT  
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY  
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD  
Paul Mooney, Human Protections Administrator  
TELEPHONE: (270) 745-2129



WKU IRB# 17-081  
Approval - 9/29/2016  
End Date - 9/29/2017  
Expedited  
Original - 9/29/2016

APPENDIX D

MHC Probation Contract

As a condition of being placed on probation with the Mental Health Court and/or having my jail sentence suspended, I understand that I must comply with the following rules of Probation. My signature below, as witnessed by a member of the Mental Health Court personnel means that I fully understand these rules, agree to comply with them, and further understand that a violation of any of the rules can be used against me to revoke my Probation which could result in myself being incarcerated for the remaining balance of my sentence.

- 1. I will notify the Mental Health Court staff of my new address and telephone number prior to relocating and changing such information.
2. I will obtain the permission from a member of the Mental Health Court staff prior to leaving the county and/or state.
3. Any reports that I make to the Mental Health Court and its staff will be truthful, and will contain any and all information as required by these rules.
4. I will report to the Mental Health Court office via telephone as directed by a member of the Mental Health Court staff.
5. I will refrain from the use of ALL alcohol and drugs. Also, I will avoid all areas where illegal drugs are present, and where alcohol is unlawfully being sold and/or used.
6. I will not carry any type or form of weapon on my person.
7. I agree to pay all Court costs and fines in this case, unless otherwise declared indigent in the eyes of the Court.
8. I will allow a member of the Mental Health Court staff to visit me at my home or place of employment.
9. I will not engage in any criminal activity and/or conduct contrary to good citizenship.
10. I will report ALL new criminal charges placed against me, whether by summons, citation, or criminal warrant, to the Mental Health Court Staff immediately.
11. I will be compliant with any Community Service Agency that the Court has deemed as a responsible placement for me, and work willingly with the case management issued by that said agency.
12. I will submit to drug screens if ordered to do so by the Court or if a member of the Mental Health Court determines that it is necessary after a review of the charges against me and/or my personal history. If the results of past history and/or the drug screen indicate a need for treatment, I agree to work with the Mental Health Court staff and treatment provider to formulate a treatment plan that addresses my needs, and I agree to complete the treatment plan designed for me.
13. Additional Sanctions:

Print Name

Signature

Date

Witness

Warrant Numbers and Charges



## APPENDIX E

### Integrity Checklist

- \_\_\_ Describe the study to MHC participants
- \_\_\_ Obtain Informed Consent to participate in the study
- \_\_\_ Fill out demographic information for each participant
- \_\_\_ Pair participants, if possible, and assign to one of the two groups
  - \_\_\_ Add to Excel sheet to note which group he/she is assigned to
  - \_\_\_ Note in participant's court file to which group he/she is assigned
  - \_\_\_ Note on participant's tracking sheet to which group he/she is assigned
- \_\_\_ During second status hearing, give voucher to participants who are compliant
  - \_\_\_ Note in participant's court file that a voucher was awarded
  - \_\_\_ Note on participant's tracking sheet that a voucher was awarded
- \_\_\_ When participants are given a voucher, tell them they are able to miss their next scheduled court status hearing
  - \_\_\_ Note in participant's court file that a voucher was used
  - \_\_\_ Note on participant's tracking sheet that a voucher was used
- \_\_\_ If non-compliant, explain to participants why they are not being awarded a voucher
  - \_\_\_ Note in participant's court file they are non-compliant
  - \_\_\_ Note on participant's tracking sheet that they are non-compliant
- \_\_\_ If participant's sentence is placed into effect
  - \_\_\_ Note in participant's court file
  - \_\_\_ Note on participant's tracking sheet
- \_\_\_ If participant chooses to withdraw from study
  - \_\_\_ Note in participant's court file
  - \_\_\_ Note on participant's tracking sheet
- \_\_\_ If it is the end of the participant's 24 weeks, assist with filling out the VBMQ