Contingency Management in the Prison System

The overpopulation of the prison system in the United States has become a societal issue that can be traced to harsher sentencing for nonviolent crimes. This has resulted in inmates staying in prison for longer amounts of time, which does not necessarily result in their rehabilitation or reduce rates of recidivism. An obvious mitigating factor to this issue is the fact that the prison system is not set up to reduce future unlawful behavior. This is often due to the use of punishment as the only contingency agent in use, while expecting a change in behavior. One possible solution to this issue is the use of an easily applicable, evidence-based procedures to bring about a change in behavior, such as contingency management.

With advancements in knowledge about physics, technology, physiology, medicine, and geology, one would imagine that we would be utilizing the most innovative, evidenced-based tools to change behavior, but a rise in incarceration rates is evidence to the contrary. Americans are especially fond of taking punitive action on those who have committed crimes, instead of relying on rehabilitation with a focus on the science of behavior. Approximately 1,505,400 individuals were considered incarcerated in state and federal prisons as of a 2016 report from the department of justice (Carson, 2018). The United States has a recent history of having a higher rate of incarceration compared to other countries, with approximately 450 prisoners per 100,000 U.S. residents held in state and federal prisons (Carson, 2018). In fact, the state of California was forced to remedy their overcrowding problem based on a Supreme Court decision, which concluded that overcrowding caused inmates to receive inadequate medical and mental health care, which violated their Eight Amendment rights (Brown v Plata, 2011). Many inmates who are incarcerated are mentally ill and still end up in the prison system instead of a treatment facility. The department of justice published a report in 2006 that highlighted the state of mental health issues among incarcerated individuals, reporting mental health problems in 56% of prisoners in state prisons, 45% in federal prisons, and 64% in jail inmates (U.S. Department of Justice, 2006).

Relying on science to provide and inform us as to what would be the most effective procedure would be the most responsible way to find a way to change behavior instead of merely punishing the individual for their inappropriate/unlawful behavior, which some prisons have begun to embrace. Using evidence-based treatment procedures has become the norm in most clinical facilities, however it has taken the prison system a bit longer to follow suit. The rise of incarceration rates is a direct result of our society getting “tough on crime” and waring the “war on drugs”, resulting in people getting tougher sentencing and more people being arrested for drug use or possession, respectively.

In the last couple hundred years, humans have gained insight into the process of learning of both human and non-human animals. There are many theories the have been posited to explain learning, the most notable theories of learning include classical conditioning and operant conditioning (Domjan, 2010). There are many ways to bring about a change in behavior using operant conditioning, including reinforcement and punishment, both of which can come in the positive or negative form. These terms don’t hold the popular culture meaning with a positive and negative connotation associated with good and bad, but rather the behavior-oriented meaning of adding (positive) or removing (negative) something from the environment or a

stimulus to bring about behavior change via contingencies of reinforcement and punishment. These terms are often associated with moral beliefs that society holds about how people should behave. If a child fails to engage in what society has deemed to be appropriate behavior, we tend to find them assistance, help them to understand why this is wrong, teach them an alternative, and work to bring about a change. Society rarely places blame on the child, but looks to the adults to explain, take responsibility, and make the change needed. However, this chain of events, or consequences, for inappropriate behavior changes drastically once the child reaches the age of adulthood. Our culture typically has less empathy and understanding for who engage in behavior that it inappropriate, given popular expressions such as, “if you can’t do the time, don’t do the crime” or “he/she should have known better.” Adults are often given fewer chances, more severe consequences, and fewer opportunities to change their behavior. However, if we apply the law of effect to all, which is the principle that underlies operant learning, it proposes that behavior is a function of it’s consequences (Baum, 2005). This principle holds the logic that: if an individual has never been exposed to contingencies that would result in a behavior change, then that change would not occur. Punishing someone who has never had the opportunity to learn an alternative behavior and receive reinforcement for engaging in alternative behaviors seems unethical and immoral. In addition, expecting a change in behavior while only utilizing punishment is illogical. However, many Americans believe that holding people accountable for their mistakes means locking them up, doing their time, and learning from their mistakes. But, the science of behavior states that behavior is most likely to change when the contingency of the problem behavior changes and by adding reinforcement to teach an alternative behavior.

Putting this idea into the context of the prison system, it is not likely that being incarcerated would result in a change in the problem behavior. In fact, there is evidence to support the notion that the prison system does not reduce recidivism (Cullen, Jonson, & Nagin, 2011). The idea that punishment alone should “scare people straight” should be outdated by now, but that just means that research needs to do a better job at informing the public about what has been proven to work. We now know that there are better outcomes to behavior change when we change the environment and replace the problem behavior with a more appropriate, pro-social behavior using contingencies. Therefore, it would behoove practitioners and prisons to incorporate some type of reinforcement to teach a replacement behavior.

The concept of incarceration from a behavioral perspective holds that removal of the individual from the environment will be so aversive and punishing that it will result in a change in behavior. Conceptually, this is the behavioral equivalent to an exclusionary time-out, often used with children in school settings. The idea is that removal from the reinforcing setting is contingent on their problem behavior occurring. In this procedure, the individual is removed for a specified amount of time from the reinforcing environment wherein the problem behavior is being reinforced, which should result in a decrease in the problem behavior. However, this procedure is typically utilized in combination with a reinforcement procedure to teach an alternative, replacement behavior, often referred to as differential reinforcement. A downside of only using only a punishment procedure first is that it is unethical, set forth by the BACB Ethical Standards because there is no reinforcement procedure in place to replace the problem behavior and teach an alternative behavior (Behavior Analyst Certification Board, 2017). Factors that influence the effectiveness of punishment procedures include the immediacy of the punisher, intensity of the punisher, the schedule of the punisher, the availability of reinforcement for the problem behavior, and the availability of reinforcement for an alternative behavior (Cooper, Heron, & Heward, 2007). Behaviorist hold that a change in behavior will likely occur only if there

is a change in environmental variables, such as reinforcement of an alternative, replacement behavior or punishment of the problem behavior. Theoretically, if you only rely on punishment as an agent for change in behavior, it will not likely result in a change, because no replacement behavior is being taught or reinforced. There is also evidence that punishment has multiple problems and side effects that are a cause for concern, including emotional and aggressive reactions to being punished, trying to escape or avoid the punishment, negative reinforcement of the punishing agent's behavior, and an unintentional increase in the problem behavior (Cooper, Heron, & Heward, 2007). It could also be argued that incarceration is merely punishment on an intermittent/random schedule, as those who break the law are not always caught, thus do not always have the consequence of punishment. This would result in the behavior being placed on an intermittent schedule of reinforcement, which is more difficult to break, as the punisher is not reliable. The prison becomes a discriminative stimulus, wherein the inmates is under constant supervision and begins to engage in socially appropriate behavior, but upon release the individual is no longer under such watch, and goes back to previously reinforced behavior, and possibly at a higher rate.

Not only do incarcerated individuals have to endure the use of negative punishment (being incarcerated), but they are often exposed to additional punishing procedures, such as reprimands, overcorrection, and more intense negative punishment procedures. Reprimands could consist of being yelled at for behavior that is against the rules, such as having contraband, aggression, self-injury, and a myriad of other behaviors that are prohibited in each facility. Overcorrection occurs when an individual is made to engage in a contingent correction directly related to their problem behavior, such as cleaning up the entire mess hall for dropping their plate or being on bathroom cleaning duties for overflowing the toilet. An additional negative punishment procedure historically utilized in many prison facilities is the use of solitary confinement. These procedures are examples of how these facilities double-down on the power of punishment, which can be viewed as denigrating and unethical.

Contingency management has been defined as the "systematic delivery of reinforcing or punishing consequences contingent on the occurrence of a target response, and the withholding of those consequences in the absence of the target response" (Schumacher et al., 2007, p.823). In basic terms, it requires differentially reinforcing behaviors that you want to see increased and refraining from reinforcing when you do not see the behaviors you want to see increased. It is most frequently used in such settings as classrooms, homes, institutions, and drug treatment facilities (Sommers-Flanagan & Sommers-Flanagan, 2015). Some familiar examples of contingency management include those used in the classroom, including, but not limited to star charts, close pin systems, and color systems. In the home setting, some examples could be getting paid or rewarded for doing chores, getting to watch tv after homework is complete, and going out for ice cream after getting good grades on a report card. In a treatment facility or prison system this procedure may be a bit more difficult to utilize because this would mean rewarding each person many times for specific behavior. However, the development of token economies has made contingency management more manageable in these settings for, in the token economy, a token is given each time the desired behavior is emitted. Then the tokens are collected and exchanged for desired items or activities. Theoretically, this means that the entire population could be on the same system but choosing their own reinforcement for engaging in prosocial interactions, line behavior, instruction following, and many other behaviors that could replace problem behavior. In the event that an inmate is deemed not likely to benefit from contingency management, some suggest that each inmate should be assessed with evidence-based screening or assessments to discern what

procedure is likely to be the most effective for them (Rempel, 2014). However, this would mean that many individuals may require a different treatment procedure, making implementation in the prison setting more arduous for those in charge of implementing such procedures. However, a token economy would allow for implementation with more ease and allow each individual to choose their reinforcer. There is a growing body of evidence to suggest that contingency management in prisons, jails, and juvenile detention centers is effective for a variety of problem behaviors.

Contingency management systems have been proven to be effective in a prison setting as a drug treatment procedure (Burdon, St. De Lore, & Prendergast, 2011). In this study, researchers sought to develop a program coined positive behavioral reinforcement intervention in prison-based drug treatment, or Project BRITE which included both men and women who were in prison systems. The authors note that there was a need for a more structured treatment procedure than previous studies had established, citing that informal use of contingencies and variation with each individual produced behavioral changes that were inconsistent. Project BRITE was completed in a period of four years and examined the effectiveness of positive behavioral intervention for both male and female inmates, measuring their engagement in the 12-week intensive outpatient prison-based treatment procedure. In this program, inmates received reinforcement contingent on completion of tasks related to treatment, attending and participating in group sessions, participation in other group activities, and engaging in behavior conducive to a prosocial, healthy life-style. Reinforcement for this project was assessed and varied for each inmate and included tangible items, privileges, and charitable donations to the community, which were gained in exchange for points earned. Participants were divided into two groups, either a control group, which included the standard treatment procedure or the treatment group. The study included 168 participants in the treatment group and 162 in the control group The results of this study indicated that the treatment procedure was more effective than the control group for males, but there was no difference between the treatment procedure and the control group for the female participants. This was one of the first studies to empirically analyze a contingency management system in a systematic way in a real-world prison population (Burdon, St. De Lore, & Prendergast, 2011).

Another convincing study used a token economy for adolescent males in a correctional institutional setting (Hobbs & Holt, 1976). In this study, researchers included 125 male adolescents, ranging from 12 to 15 years of age. In this study, the participants were broken up into groups of four, each corresponding to their cottage and functioning level. Within each group, researchers created three separate categories of behavior, including line behavior, cottage behavior before dinner, and cottage behavior after dinner. After training staff, the procedure targeted appropriate social behavior including talking to peers, orienting body towards peers, completing chores, following cottage rules, and following instructions. The problem behavior included disruptive and aggressive behavior including cursing, loud accusations, hitting, kicking, making threats, and pushing. The researchers utilized a multiple baseline design across cottages to analyze differences in the groups, using one cottage group for the control group. Data were collected over a period of 14 months and researchers surmised that appropriate behaviors increased across each cottage over time in comparison to the control group (Hobbs & Holt, 1976).

There are additional studies that have examined the use of token economies for a variety of other settings and for other populations as well. Research has stated that facilities that utilize such procedures as token economies are more effective in the treatment for institutionalized

youth compared to those without (Reidy et al., 2015). Research has also suggested that token economies can be an effective treatment for food refusal when used in correspondence with an escape contingency (Kahng, Boscoe, & Byrne, 2003). Token economies have also been supported to be utilized with individuals who are diagnosed with schizophrenia in long-term treatment programs wherein focus is on personal hygiene, social interactions, and other adaptive behaviors (Shean, 2013).

There are many advantages to utilizing this and other types of evidence-based procedures in a correctional setting. One obvious motivation to utilize these procedures is financial, as evidenced by researchers in Washington state (Drake, Aos, Miller, 2009). There are specific advantages to using token economies as well. One advantage of using a token economy is the facility may utilize the current staff to administer the procedure instead of having to hire outside technicians or counselors. This would require prison staff being properly trained to pair the token with reinforcement, administer the procedure, and take data on the rate of desired behavior and the problem behavior, distribute tokens, and maintain progress of procedure. However, utilizing staff who are already employed is going to save the facility and tax payers money in the long run. This procedure would have to be monitored by someone who could ensure that tokens were not being removed, which would be considered a response cost, which is categorically a negative punishment procedure. A common reaction to some individuals who are in charge of distributing tokens is to remove a token when the problem behavior occurs, which would be counterproductive and likely cause the behavior to return or increase. One study highlighted that a failure to monitor a response cost procedure in a penal system resulted in it being widely overused (Bassett & Blanchard, 1977). Utilizing a procedure on cite seems like a reasonable alternative to having the inmate removed to attend some program to change behavior. Another advantage to using contingency management is that it is more likely to reduce problem behavior than using punishment alone. It is also less likely to cause an increase in problem behavior, as adding another punishment may cause. Using this procedure may also transfer some of the reinforcing properties to the behavior itself, decreasing recidivism and increasing prosocial, appropriate behaviors.

In summation, utilizing evidence-based practices and procedures would benefit prisons, jails, and detention centers in numerous ways. Utilizing contingency management might be one of the easiest ways to gain these benefits at little cost and effort. There is mounting evidence that these systems would be widely beneficial, but more research needs to be completed and researchers need to improve upon dissemination of evidence to the general population.