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HELPING PEOPLE WITH SUBSTANCE USE DISORDERS:
DRUG COURT AND CARE FARMS

By

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A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
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In the field of Rehabilitation Counseling

Approved by:

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CHAPTER 1

THE PROBLEM OF SUBSTANCE ABUSE

Substance use disorders in individuals is a wide spread problem and a complicated issue. SAMHSA (2019) cites the 2007 statistics related to the diagnosis of substance use disorders. The results are staggering: 22.3 million individuals in the US were diagnosed with substance use disorders in that year alone. Despite the availability of a variety of treatment options, this authority also estimates that 89.6% of these cases go untreated. Our communities and families are effected in many different ways, most of which have negative outcomes due to the substance abuse. This prevalent problem in our society needs attention and effort put into helping people recover in order to restore and return balance to all elements of the individuals lives.

Substance use disorders are so common and have such a negative impact on society, it's a wonder what the origins of this prevalent issue actually are. The cause of substance use disorders has been examined, with significant findings. Richards and Kafami (2008) describe the onset of substance use disorders as a complex interaction of biological, psychological, social, and environmental influences. With these several different elements of causality being additive, there is an intricate relationship of the many aspects of influence on the development of substance use disorders. Substance use disorders do not have an easily defined point of origin: each individual case is unique. Every individual has different elements of these biological, psychological, social, and environmental influences but there are some common elements in biology that seem to point to a common point of origin.

Chandler, Fletcher, and Volkow (2009) discuss the research that has been presented in the last 20 years which supports the idea that addiction is a brain disorder, with a significant genetic role, that has been revealed more and more by neurobiology, molecular genetics, and

imaging studies. This multi-modality approach to defining the origin of substance use disorders has advanced significantly in recent years. These researchers find that 40-60% of vulnerability to substance use disorders stems from genetic factors. They reveal that genes identified to add to vulnerability to substance use disorders lie in changes to the neuroplasticity of genes associated with learning. This is a significant departure from the common idea that individuals with substance use disorders caused their addiction and were at fault. Modern views humanize the experience of addiction and focus on the origin, not from a standpoint of blame, but of biology.

SAMHSA (2019) also points to a different line of evidence: the role of pharmaceuticals in blocking cravings. The fact that pharmaceuticals can block the addictive pathways in the brain points to a biological origin to substance use disorders. SAMHSA (2019) also points out that there has been ongoing evidence that neuropathways and chemical changes are a genetic source of this complex disorder. Genetics plays a significant role in the onset of substance use disorders and must be considered when examining the context of an individual's treatment. This evidence leads one to think that this is an issue of biology and must be treated not from a punitive point of view but from a treatment standpoint in order to help an individual with a substance use disorder overcome their addiction.

SAMHSA (2019) points out very important features of an individual's life that are affected by substance use disorders: health, home, purpose, and community. One of these elements that will be discussed in this research is the factor of purpose. This sense of purpose is outlined by SAMHSA (2019) as having meaningful everyday activities that support an individual's role in society, including work. The NIH (2020) points to the significant goal of stopping drug use as a first line to helping people lead productive lives and return to functioning in their families, workplaces, and communities in general. This source goes on to discuss the fact

that, like other chronic diseases, addiction is treatable. There are powerful changes in brain function and behavior as a result of addiction and that this is a barrier that can be overcome. Houge et al (2009) point to the use of mood-altering substances as a significant barrier to employment and that maintaining abstinence is a key factor in overcoming this barrier. Their study points to the need for employment direction in the early stages of substance use disorders treatment to help individuals overcome barriers presented by a lack of work readiness factors. According to their research, barriers to work may include physical and mental health disabilities, housing issues, legal problems, limited work experience, lack of transferable work skills, and childcare barriers. They cite that the greater number of these barriers that present themselves in the lives of an individual with a substance use disorder, the lower the success the individual will find in attaining employment and maintaining a job. Sigurdsson et al (2012) point to research that suggests that employment rates of individuals in active addiction are approximately 15-35% and that individuals in active addiction face barriers such as the drug use itself, limited educational backgrounds, low levels of technical and transferable work skills, and a lack of interpersonal skills.

Work can however play an important role in recovery from addiction according to Magura et al (2009). In an additional study by Magura et al (2009), they agree that if an important part of addiction treatment is to help people gain competitive employment then it is important that an element of treatment be providing vocational assistance within treatment programs. According to the Life Course Theory, there are specific categories that are defined as turning points in one's life course that may be additive to an individual achieving and maintaining employment after the active phases of substance use disorders according to Messer, Pattern, and Candela (2016). They cite self-motivations and the influence of others as

major factors in helping people with substance use disorders overcome the barrier to employment.

This evidence begs the question then: what treatment modalities are in use which support individuals with substance use disorders to maintain abstinence and overcome barriers to employment? Of course, there is the initial support of substance use disorder treatment Centers, but what is to follow? Two novel and recent pathways are Drug Court and Care Farms, both of which support individuals to maintain abstinence and ultimately lead to greater employability in individuals with substance use disorders.

Heaps et al (2009) find that over fifty percent of people incarcerated in US prisons have diagnosable substance use disorders in the year 2005. Chandler, Fletcher, and Volkow (2009) relate that twenty-five percent of individuals released on drug charges return to prison within three years. Marlowe (2011) cites statistics that nearly a third of inmates return to substance abuse after incarceration within one to two months after release. Fulkerson, Keena, and O'Brien (2012) point to the fact that in 2012, 4 million individuals were on probation and 24% of those had a drug conviction. They also present the fact that 20% of state and 55% of federal inmates are arrested for drug offences. The nature of substance abuse also has them point to the fact that relapse is often a part of the process for individuals with substance use disorders and that more support is needed to help individuals maintain abstinence.

Overcoming the barrier of long-term maintenance of abstinence is an issue. Chandler, Fletcher, and Volkow (2009) describe statistics related to relapse: the graduates of Drug Courts have a re-arrest rate half of that of dropouts or those who have not participated in Drug Court. They see this treatment alternative to incarceration as having very positive outcomes for people who have substance use disorders. Fulkerson, Keena, and O'Brien (2012) demonstrate that Drug

Court has a significant positive effect on its participants. They show that in 2,020 graduates of Drug Court, 2 year recidivism rates for Drug Court participants to be 27.5%. Chandler, Fletcher, and Volkow (2009) go on to describe alternatives to incarceration, such as Care Farms, as having an increased 7 fold likelihood for individuals to be drug free and 3 times less likelihood of arrest for criminal behavior versus those not receiving alternative treatments. Heaps et al (2009) discuss the importance for individuals with substance use disorders to be a part of long-term abstinence-directed activities and support networks. Drug Court and Care Farms provide these environments and support. Marlowe (2011) discusses at length the importance of therapeutic communities, such as Care Farms. He cites reductions from thirty to fifty percent in recidivism rates for individuals who go through a therapeutic community to aid their return to society from substance abuse.

The above combined findings support the need for alternatives to incarceration, such as Drug Court, and therapeutic alternatives, such as Care Farms. There is a desperate need for the support found in Drug Court and at Care Farms. The data supports that measures, such as these, are a necessary step in guiding individuals to a restoration of health, home, purpose, and community. Having an individual take one of these paths in their recovery can be a substantial benefit to their well-being and strength to overcome their addiction and can lead to long-term successes, including benefits to their family and themselves, such as competitive employment. Green and Rempel (2012) point to findings that reveal that 15-30% of drug abusing individuals are employed, while 72-77% of individuals who do not abuse drugs are employed, pointing to specifically cocaine and marijuana use as predictors of a reduced likelihood of future employment. It is imperative that programs like Drug Court and Care Farms are available to individual's with substance use disorders, to help them support their long-term abstinence and

help them build the skills and mindset necessary for employment.

The cost of substance use is high to society. Incarceration is very expensive and as stated above, the recidivism rates are very high. SAMHSA (2019) cites that the costs to society and families is a systemic burden. They cite loss of productivity, the problem of child maltreatment, emergency room visits, incarceration, vehicular accidents, and premature death as some of the many factors that are affected by substance use. Morse et al (2015) do cite some hopeful facts: decreases in criminal behavior, emergency room visits, incarceration, and unemployment with alternatives to treatment such as Drug Court or Care Farms can lead to a 7:1 cost savings. They also describe the tremendous challenge that individuals face once they have been incarcerated in obtaining employment. This history of imprisonment can greatly reduce an individual's ability to become employed due to resistance of employers to hiring convicted felons, which only adds to the cost and burden to our societies and families. Schottenfeld, Pascale, and Sokolowski (1992) reveal that problems with employment for people with substance abuse disorders is common, and describe the lack of effective and appropriate measures to provide vocational and treatment interventions to these people. Drug Court and Care Farms both provide treatment and support to help individuals avoid incarceration and receive support to living an abstinent life and becoming productive members of society, including preparation for these individuals to be successful in the world of work.

There is a serious issue that presents itself when people have substance use disorders. People's whole lives and society are affected. Treatment alternatives to incarceration are critical to providing support to people as they rebuild their lives. One key component of life is managing your ability to gain and maintain employment. Drug Court and Care Farms present alternatives to incarceration and provide necessary support to individuals as they transition from the

devastation of substance abuse to being reintegrated into society, including employment. Further discussion will reveal the methodology, history, effectiveness, and outcomes of both Drug Court and Care Farms. Finally, a comparison of Drug Courts and Care Farms will be presented.

CHAPTER 2

DRUG COURT

Drug Court has a long history of offering offenders with substance use disorders a treatment modality to help them restore health, home, purpose, and community. The process of Drug Court, outcomes, and findings related to recidivism will be explored with a focus on this as an alternative and augmentative treatment to aid individuals as they overcome their substance use disorders for the long-term. Drug Court is an investment of time and resources, however the value to the individual and society is priceless. There is a great benefit from the positive outcomes from Drug Court to the individual, their families, and society at large.

As described by Christie (2016), Drug Court began in an effort to provide therapeutic treatment instead of incarceration for people with substance use disorders in Miami in 1989. There was a national interest in rehabilitation versus prison time for offenders and that court embarked on the mission to support rehabilitation in individuals with substance use disorders. The criminal justice system was overloaded with cases involving individuals with substance use disorders. A new approach was necessary to overcome the obstacles that were in the justice system to help individuals with substance use disorders lead healthy and productive lives. The way the justice system approaches this is important, but there is the question of how incarceration affects the individual and environment as a whole and how incarceration affects people and their communities. Kornhauser (2018) points to the fact that sentencing individuals to prison often has a counterproductive effect on the individual and society at large. He particularly highlights the expense financially and the role incarceration plays in effecting the wider community. The emergence of Drug Court as a response to an overburdened, ineffective system of justice, and the impact prison has on individuals and their environments, are key aspects as to

why this intervention is necessary and effective.

As of 2011, there were over 2,100 Drug Court programs, according to Fullerton, Keena, and O'Brien (2012) and the availability of this treatment modality has only increased since then. Heaps et al (2009) make the bold assertion that Drug Courts are the most widely available and accepted integration between treatment and justice that is available. Drug courts have brought to the table an innovative treatment modality to those individuals with substance use disorders in an effort to keep people out of prison and into recovery, which ultimately treats the underlying issue of addiction and criminal behavior while avoiding the cost and disruption to the lives that incarceration brings to individuals with substance use disorders.

Judges began to support seeing these individuals in a more holistic manner, according to DeVall, Gregory, and Hartmann (2012). They go on to reveal that Drug Court is a model which bases itself on social learning theory, focused on how people learn from their environment, and can pick up on aspects of both criminal and prosocial behaviors from the people around them. They describe modeling as a very important aspect of social learning theory that applies to Drug Court. They propose that the more similarities one sees between themselves and others, the more powerful the role that person can make on helping the individual enact change in themselves. They go on to support the idea that the responses individuals get from others in their environment will help an individual gauge whether they continue or discontinue a behavior. Whether or not an individual receives rewards or punishments for behavior will influence the individuals behavior and can illicit changes to receive different rewards or consequences in a given situation. They find that Drug Court offers a continuum of support services which can help individuals towards abstinence and offer modeling for ceasing criminal activity, per social learning theory.

Participants in Drug Court also reported significant changes in their social networks as a result of participating in Drug Court, according to DeVall, Gregory, and Hartmann (2012). Their social support changes with involvement in Drug Court. Individuals may cut ties with drug-using family and friends and restore relationships that were previously at odds because of their substance abuse. Participants also report that they found fellowship in 12-Step programs and a common bond with other participants in Drug Court, from which they could find genuine support to overcome their addiction and criminal behavior. They found the guidance and support from renewed and new relationships was essential to their success in overcoming their substance use disorder and reintegrating back into their families and society at large.

Someda (2009) describes the simple but effective approach that Drug Court takes to helping individuals with substance use disorders transcend their addictive and criminal behaviors. Drug Courts primarily target non-violent criminals with substance use disorders who are not seriously anti-social to participate in several aspects and phases of the program. Reporting to the court on regular intervals, participants are required to participate in drug screenings, classes in out-patient drug treatment, participation in 12-Step groups, and individual and group counseling. Most Drug Courts also require an individual to obtain employment, or actively seeking employment, or participate in school to support their transition from using to abstinence. These supports typically last one year to eighteen months and after the program, no criminal punishment is imposed if the individual adheres to the stipulations. Research from DeVall, Gregory, and Hartmann (2017) suggests that graduates should spend between twelve to sixteen months in the program to achieve the best outcomes. Someda (2009) goes on to say that violations to the program typically meet with stiff sanctions and possible jail time. Fulkerson, Keena, and O'Brien (2012) discuss the sanctions that are faced by Drug Court participants if they

fail to follow through on the expectations of the court. These deterrents include public service, short jail sentences, house arrest, increased out patient treatment, ankle bracelet monitoring, and a possible restriction on activities or people with whom they can associate. Someda (2009) continues that if the judge finds that the individual has no interest in rehabilitation, then the criminal proceedings that they were facing for their charges are reinstated and they are processed through the justice system. However, if the individual completes the program with few issues, then their criminal record would be erased, which can dramatically effect the individuals prospects for future employment and reintegration into society.

An example of the Drug Court process can be seen in Greene County, Arkansas. Fulkerson, Keena, and O'Brien (2012) present this case of a Drug Court and refer to the common practices it employs. This example is very typical of Drug Courts in the USA and will reveal the way most offenders go through the steps of recovery through Drug Court.

This program in Greene County has been in effect since 2005. They follow a common team approach which includes a drug court judge, prosecuting and defence lawyers, probation officers, counselors, and various administrative assistants. The process starts with a referral from one of the lawyers to the judge. Participants in this Drug Court can have no weapons charges or violent criminal history to be considered to enter the program. The offence does not have to be drug related, but must be a manifestation of the individuals drug addiction. This particular program is also not for first-time offenders: the participant must be a habitual offender.

The individual meets with a probation officer and Drug Court counselor and if the criteria are met, the individual is referred to the drug court judge and given the opportunity to be a part of the program. The average number of participants in this Drug Court typically is thirty and the program takes fifteen to eighteen months to complete. This is a significant investment from the

offender in their recovery and they must adhere to a variety of stipulations in order to be successful and complete the program.

Participants are required to go to group and individual counseling, attend in Alcoholics Anonymous meetings, are subjected to random substance abuse screenings, must appear before the Drug Court judge regularly, and be either gainfully employed or volunteering. Potentially, the participants would be referred to outpatient, inpatient, or long-term substance abuse treatment, depending on where the individual is in the course of their recovery. Supervision is an integral aspect of this Drug Court, and within the programs four phases, at each phase, the amount and frequency of supervision decreases. Supervision is an essential part of the Drug Court program. It guarantees program adherence and provides support and accountability to participants that they may have never experienced in their lives before. The Drug Court judge becomes their guide and master as they go through the process of regaining their lives. This level of accountability ultimately translates into them being able to be accountable for their own actions to themselves.

Though this court realizes that relapse can be a part of recovery, sanctions are imposed for failing to meet the criteria of the court. These may include community service, short jail time, inpatient treatment, or incarceration in a treatment prison for up to nine months. If the individual is unsuccessful in meeting the requirements of the program, they are sentenced on their charges which brought them to Drug Court. This is an unfortunate consequence of the offender not following through with the program, but as we can see, it is a part of the process for some, but not all, of the individuals who participate in Drug Court.

Upon completion of Greene County Drug Court, there is a graduation for the participants and their families and friends. This is a celebration for all involved. The court has had a

successful case, the individual's charges are removed, and their lives are in the process of being restored. Each case that closes successfully is a victory for the individual, Drug Court, their families and society at large.

In addition to Drug Court, in some areas there is an organization which focuses on supporting individuals with substance use disorders and Drug Court to be more successful in preventing recidivism. Heaps et al (2009) describe the Treatment Alternatives for Safe Communities (TASC) in Illinois which have been working since the 1970's to partner with Drug Court and individuals with substance use disorders to connect resources like counseling and treatment with the offenders who need this support. They find that having an outside agency manage the interface between Drug Court and the treatment and counseling side has been more effective than Drug Court alone focusing on supporting the offenders. TASC focuses on developing a recovery-oriented system of support for offenders. Case management is an important aspect of this support and their counselors work to connect participants to a variety of resources in the community to help them overcome their addiction and to be ready for reintegration into society. These counselors have specialization, such as severe mental illness or working with offenders entrenched in criminal lifestyles, to help guide the offender to successful completion of the TASC and Drug Court programs. This adjunct to Drug Court is a popular option in Illinois and it bears merit to discuss this adjunct to Drug Court in light of the need for aftercare that is so supported in the literature. DeVall, Gregory, and Hartmann (2017) have found clear evidence that the longer a participant stays in the Drug Court program, the lower their recidivism rate is found to be. They see marked improvement after the five month mark for participation vs recidivism. This evidence supports the TASC model, which supports individuals in the Drug Court program for an extended period of time. Over a two-year period from 2007-

2008, Heaps et al (2009) point to 15,500 probation clients achieving a 67% completion rate for the TASC requirements and of 3,100 parolee clients, 49% met all the required components of the TASC program. This is evidence of a successful program that guides individuals through both addiction recovery and Drug Court.

Major life events and change are turning points in an individual's life-course and are often preceded by a great struggle and there must be a significant investment of time and effort into the process of change, according to Messer, Patten, and Candela (2016). They go on to report that Drug Court has significant evidence of reducing recidivism and adding to the offender's tool kit of coping strategies that the significant investment of time and effort really does pay off for the individual in the long run, making a satisfying life possible for these participants. One area that they explore is developing self-worth as a result of participating in Drug Court. They find that there are significant gains in individuals self-worth and self-perception as a result of Drug Court which aids the individuals to make decisions about their behavior that is rooted in their strengths rather than criminal behaviors and their addictions. Relationships to others can be improved and the individual's relationship to their environment also improves significantly. Drug Court gives a space for personal and interpersonal relationships to grow. This can significantly improve an individual's outcome and progress towards healthy decisions for the future. Especially, there is an increase in the individual's ability to improve their health, home, purpose, and community. As pointed out earlier, ultimately the role of these treatment options for individuals with substance use disorders is to restore and improve on these factors to aid people in living productive, healthy lives. Drug Court has been shown to help people build and adjust to a lifestyle they may have not been familiar with in the past.

Messer, Patten, and Candela (2016) go on to point out that some of the turning points that participants in Drug Court may experience can include earning a GED, obtaining drivers licenses, or secure gainful employment. There is also the significant development of trust between the individual and their families and communities as they demonstrate their desire to live without their addiction dominating their lives. The participation in counseling and groups helps the individual focus on their recovery and shows their willingness to change. This can be a real turning point for both the participant and their families on reestablishing trust. This can be a major turning point. Even though the offender may have been court mandated at the start of the process, it's possible for the participant to build so much of their lives as a result of this program, that they become grateful and willing participants in their own recovery process.

Green and Rempel (2012) focus on psychosocial benefits from Drug Court and find there are many. They look at indicators such as socioeconomic factors, relationships with family and society, psychological health, and the decrease in homelessness. These socioeconomic factors include financial needs, employment, education, and income. They also see great benefits to reducing the role of addiction in an individual's life and decreases in family dysfunction. They found that Drug Court participants were significantly more likely to be participating in an educational program and more likely to become employed versus non-Drug Court participants at eighteen months into the program. Also, they found that Drug Court participants also have increased income as a result of their participation in the program. Family dynamics also shift as a person participates in Drug Court. The participants report significantly less familial distress than their non-Drug Court participating peers. They report mental health also had a significant improvement. Homelessness was also reduced at the eighteen-month mark and this represents a great improvement for the Drug Court participants. Overall, the study revealed that there were

significant psychosocial improvements for individuals who participate in Drug Court at the eighteen-month mark.

Fulkerson, Keena, and O'Brien (2012) found that Drug Court participants found individual counseling the most effective element of the program, but also felt group counseling was effective. They looked at the restorative nature of Drug Court and offenders reported that they appreciated the accountability the program forced them to have and were greatly influenced by the restorative nature of the program. Families, friends, and communities were affected by Drug Court and the nature of change that the individuals underwent. The counseling and support the participants get in Drug Court provides a platform for them to work on rebuilding their connection to developing health, home, purpose and community.

CHAPTER 3

THERAPEUTIC COMMUNITIES

Therapeutic communities center their mission around a recovery orientation to support long term abstinence in individuals with substance use disorders. The National Institute of Health (2015) reveals much about therapeutic communities. They began in the 1950's, stemming from self-help substance use disorder groups, such as Alcoholics Anonymous. These therapeutic communities vary widely, but all focus on mutual support towards the end of addiction from substance abuse and restoration of health, home, purpose, and community.

The National Institute of Health (2015) goes on to report that this approach started with a few communities in the USA but has grown to be popular in over 65 countries world-wide as of 2015. At first, therapeutic communities were run solely by peers, but over time as these groups expanded, many now offer professional support as well. Still, it is reported that more than half of workers in most therapeutic communities are in recovery themselves and have studied for certification in the treatment of substance use disorders at the bachelors or masters degree level. This once unfamiliar practice of therapeutic communities is now a well-established method globally, used to foster abstinence in individuals with substance use disorders.

Therapeutic communities are recovery focused and look holistically at a person's entire life as they provide support and treatment. These communities support a lifestyle change for their participants. At the start, participants may have limited expectations on them, primarily to focus on abstinence. Over time though, participants assume a greater and greater role in responsibilities at the therapeutic community. One aspect that is critical to these communities is the role of peer-to-peer support. There is a strong focus on mutual support and responsibility for their peer's recovery. Most communities also require employment and/or education as a part of fulfilling the

requirements of the program. This work and/or school requirement is an integral component of the programs. Ongoing support for after-care from the therapeutic communities is critical as well. Once a participant has found success, their ongoing abstinence is supported by connecting the individuals to self-help groups, counseling, and other peer supports in the area where they will be living. These examples support the need for and effectiveness of peer support and ongoing aftercare.

Therapeutic community (TC) theory focuses on the idea that substance use disorders wear on positive family and societal ties, social functioning, educational and vocational goals, and general health and wellbeing. This form of recovery focuses on rehabilitation of the individual but there can also be habilitation, learning these life skills in context for the first time in an individual's life. These programs are highly structured, with clear expectations, and focus on enabling recovery while focusing on the participants strengths. Routines may include group sessions, individual time, group and personal counseling, house meeting in the morning and or evening, recreation, community-based learning, seminars, and work skills development. These work skills trainings may involve employment directly or a combination of work skills development and job training.

There is a very integral component to TCs in that they rely on a hierarchical social structure that has the more experienced members leading and providing support to the newer members. This is a more collectivist theory than many other traditional methods of rehabilitation, such as incarceration in the prison system. These more experienced members can offer very directed support and discussion about the expectations for the community and also model these behaviors for the newer members. Though there is a movement to group accountability, the TCs have found that this leads to greater self-efficacy on the part of the individual group members,

which ultimately leads to greater success with abstinence.

The National Institute of Health (2015) goes on to reveal that the effectiveness of therapeutic communities, especially among the participants with the most severe problems coming into the program, is very strong. Substance use after five years post-attendance in a therapeutic community was cut in half and employment was approximately double as well for those participants who attended a therapeutic community for more than six months.

CHAPTER 4

CARE FARMS

Horticulture as therapy dates back to the 1700's, according to Porchey (2007). Evidence suggested that improvement was found in individuals with mental health conditions in their physical and mental health when used as a treatment in insane asylums. Since the 1800's prisons have used gardening as well to not only provide food for inmates but to also rehabilitate offenders and give them an opportunity to learn a skill which can be used for gainful employment after release. Hine (2008) reveals a key component of the interplay of nature and health in that contact with nature enhances psychological health by reducing stress levels, improves mood, and offers a protective facet to mental health as people engage with a restorative environment. Haller, Kennedy, and Capra (2019) describe horticultural therapy as a method by which the therapist can guide the client to physical, cognitive, emotional, or social growth. For many centuries, engaging with nature and specifically, horticultural therapy, has proven to be an effective intervention to help people lead healthy and productive lives, specifically improving health, home, purpose, and community.

The basic premise of horticultural therapy revolves around the use of plants to illicit changes in physiological or psychological make up and social or vocational skills of an individual and improves the persons quality of life, according to Haller, Kennedy, and Capra (2019). They go on to say that since the 1960's, the profession of horticultural therapy has been better defined, so that now it is seen as a stand-alone therapy for positive change in an individual's life.

Sandel (2004) contributes that there are three types of horticultural therapy: vocational, therapeutic, and social. Vocational horticultural therapy helps people build a skill set that will

ultimately lead to gainful employment. These programs are rooted in a rehabilitation model, which is focused on aiding people in recovery from illness, injury, or disability. The expected outcome from this therapy is employment. Therapeutic horticultural therapy is designed to guide people in the recovery process. The goal is to work towards personal wholeness: especially curative or healing effects. Social horticultural therapy offers a leisure activity that promotes general well-being. This modality is most commonly seen as recreational and a way to promote wellness.

Simpson and Straus (1998) further describe vocational, therapeutic, and social horticultural therapy. They first support that in general, horticultural therapy seeks to improve the wellbeing of participants. Secondly, they describe that wellbeing involves not only an absence of illness but also maximizing health and self-actualization of the participant.

Rely and Dorn (1995) define horticultural therapy as among the allied health professions and make a correlation between the difference of going for a walk versus physical therapy and planting a seed versus horticultural therapy. Horticultural therapy is an integration of plants and the innovation of the horticultural therapist, with the two combining to create a therapeutic environment which supports all manner of growth in individuals towards improving health, home, purpose and community.

Care farming is umbrellaed in the more general nature therapy approach called Green Care, according to Hine (2008). Care Farming specifically is described by Hine (2008) as utilizing agricultural landscapes and commercial farms as a platform to illicit positive growth in mental or physical health, by using normal farming activity as an intervention. There are different approaches to Care Farming, however all have some degree of farming, which may include crops, livestock, woodlands, etc, and some element of care, which may include health

care, social rehabilitation, educational or vocational training. Care Farming takes the necessary life activity of producing food and adds the element of therapy to the process, making horticultural therapy in a farming setting a reality.

Haller, Kennedy, and Capra (2019) also describe Care Farming. They find that the structured programs offered by farmers can offer a great benefit psychologically, socially, physically, or cognitively. The interaction on a working farm may consist of caring for animals, raising crops, woodland management, gardening, and land conservation: the entire farm operation. Horticultural therapy is achieved in the interplay between farmers, participants, therapists and meaningful tasks and experiences in an interactive environment.

Haller, Kennedy, and Capra (2019) reveal that vocational horticultural therapy is focused on work skills and employment outcomes. Three elements come into play for the horticultural therapist. Balancing vocational training, vocational horticulture, and vocational horticultural therapy is key. The aim of vocational training is to develop the knowledge and skills necessary to perform a specific trade. Vocational horticulture prepares the individual specifically to work in an agricultural-related field. Vocational horticultural therapy incorporates a trained professional, participants with defined goals, and interaction with plants, animals, or the environment. They go on to describe that there are efforts world-wide to enable people with disabilities to enter the workforce, including those with substance use disorders, and vocational horticultural therapy can enable these employment opportunities.

Simpson and Strauss (1998) look further into vocational horticultural therapy and define specifically the levels of support towards employment that may be available to participants. Sheltered, supported, or competitive employment variants are made available to better train people with disabilities, such as substance use disorders, on Care Farms. To define these levels

of job support, they go on to discuss that sheltered employment often focuses on increasing the productivity of a participant on a specific job with the most intensive support and guidance from crew supervisors, therapists, or trainers. This is akin to the Care Farm activities that people with substance use disorders may receive when first starting at a Care Farm. There is much hands-on supervision from the farmers and their staff. Intensive training and support is offered to participants from the start of the program. The next less restrictive environment is supported employment, which involves the participant and job coaches and generally will happen within the industry. Care Farms offer this transition in support as well as participants build more independence as they require less and less support in the field in order to complete the tasks needed. Finally, competitive employment occurs when the participant is fully integrated into the real-world employment environment with minimal if any supports. At this point the individual is empowered to complete the work on their own. Care Farms also afford participants the freedom to master skills and work and act independently. This is an interesting evaluation of a vocational horticulture therapy method in that the employment training that participants receive at Care Farms follows vocational theory.

Ascencio (2018) looks at horticultural therapy in light of Social Cognitive Career Theory and sees a strong benefit for substance abusing offenders in the prison system. They suggest that personal influences and background contexts predict an individual's readiness to learn from new experiences. This theory supposes that offenders have prior schema which influence their ability to take in their environmental cues. Prison vocational horticulture therapy programs are novel to many offenders and their prior impressions may make it difficult to adjust to new input, but this study finds a great influence on skills acquisition, self-esteem, and self-efficacy. Another benefit to the substance abusing offender is that these vocational horticultural therapy experiences help

them reconceptualize their drug use and frame that use in different ways that are more positive and productive. They also find that employment is associated with a decrease in re-offence and an increase in psychological well-being. Vocational horticultural therapy in the prison system can provide generalizable skills which offenders can put into direct use as they engage in gainful employment in the future.

Migura, Whittlesey, and Zajicek (1997) describe the locus of control that inmates can build as a result of horticultural therapy. They describe the self-development of inmates and their transition from an external locus of control to an internal locus of control, with increased self-esteem. These factors were positively correlated with successful parole outcomes.

In the UK, Hine (2008) reports that there is a great deal of pressure on health and social welfare organizations, prison and probation services, and the educational system to provide solutions to the issues which arise from substance use disorders in individuals. Care Farming provides an option to help rehabilitate individuals with substance use disorders that synthesizes efforts in all of these areas.

Hine, Peacock, and Pretty (2008) report that in Europe, there are a large number of Care Farms. The Netherlands has 818, Norway 500, Italy 350, Belgium 212, Germany 167, Ireland 90, and there are many other countries who have Care Farms as well. For example, in the Netherlands in 2005, 10,000 individuals were participating in Care Farm programs. Eight thousand of these were non-prison populations. Elings and Hassink (2008) report that in 1998 there were 75 Care Farms in the Netherlands and in 2008 there were over 800. Care Farms have been increasing in number over the past few years.

Elings and Hassink (2008) completed a study among individuals with substance abuse disorders at eight Care Farms in the Netherlands. Initially, most participants with substance use

disorders noted that there were no other after-care treatment options available to them other than Care Farms. They found that working at a Care Farm dramatically increased participants self-esteem, self-respect, and responsibility. The participants found the structure and discipline at Care Farms helpful. Most participants came to the programs with little concrete idea of the process in store for them but over time, participants enjoyed being a part of a group and a feeling of ease. They also appreciated being involved in useful activities and the space afforded them when working at the farms. These changes over time can build a new foundation for vocational success for individuals with substance use disorders. These outcomes demonstrate the power of vocational horticultural therapy.

Hine (2008) describes a survey of Care Farms in the UK. In the UK, at least 5,000 participants benefit from the programs at Care Farms each week. The study looked at 76 Care Farms and found that they can vary in size and what they produce, from crops to livestock to wood lots. It was found that the focus on the farms varied but development of basic skills was present in 87% of farms, expansion of work skills was found in 70% of the farms, increasing social skills was present in 65% of farms, and there were also various accreditation programs at 63% of the farms.

Loue, Karges, and Carlton (2014) examined Care Farms in Europe and found that, in addition to animal husbandry, crop production and farm maintenance, Care Farms may offer the therapeutic interventions of mood management, equine therapy, dialectical behaviour therapy, creative projects, meditation, education, financial literacy, medication management, and independent living skills such as cooking, cleaning, shopping, and healthy living.

Richards and Kafami (2008) looked at a Care Farm model in a prison system that focuses on offenders with substance use disorders. The program evaluated is in Patuxent, Maryland and

is a co-educational maximum-security prison focused on aiding individuals with substance use disorders or substance related crimes. They have had this focus since 1995. Typically, the opportunity for this experience is offered once to participants and lasts the six months of the growing season. This program seeks to define deficits in offenders and uses direct treatment services such as therapy, counseling, and group sessions to correct, modify, or minimize psychological or social issues. One unique aspect of this particular program is its focus on integrating African culture and principles. Offenders are taught about the Gaia theory, cultural, spiritual, and universal principles. Gaia theory proposes that the earth is a living organism and Gaia is the goddess of the earth. Ecology is also taught, but with a focus on relationship ecology where participants are given a perspective that the connectiveness they feel in the garden can translate into their daily interactions with others. The prisoners are taught that a good landscape has balance, symmetry, contrast, and proportionality and that their lives can also have this type of healthy, beautiful interplay. Group therapy includes a focus on the parallels of the human life cycle and plant production. The values of hard work, respect for self and other living things, and the development of vocational skills are critical components of this model.

Another vocational horticultural therapy program for substance abuse treatment is in Denton, Texas, according to Sandel (2004). This program is for youth and typically has approximately twenty-five co-educational participants at a time. The average stay is 9 months in the program and it began in 2002. This program utilizes container gardening and has participants working in the garden for a few hours each day. The researchers report that the juveniles worked as teams and they were observed to be calmer and more relaxed. An example given in the research says a juvenile had a pepper plant that was not thriving and the staff told him to put it into the compost pile. He took the plant and nursed it back to health and it began to thrive. The

youth gained a very poignant insight into himself in that he felt the plant was a representation of himself, that most other people had given up on him and his fellow offenders and wanted to put them into the compost heap, but with care and patience, they too could learn to thrive. Another idea the youth gleaned from the program was that the garden was chemical and pesticide free which they equated to the transition their own lives had made between a substance-abusing life to a life of addiction recovery. They went from using chemicals to drug free, like the garden they tended.

Jacob's Ladder Brookside (2020) is a residential long-term substance abuse treatment facility for men in Aurora, West Virginia. The average stay is 6 months. The focus of this Care Farm is on developing commitment, respect, honesty, and responsibility in the participants. The specific programs offered include farming and livestock care, mindfulness, music, art, and wilderness adventure therapy. The participants live and work together on the farm. Daily chores are a part of the experience as is counseling and group therapy. The residents live in a common house and there is ample time for social skills development in addition to the vocational horticultural therapy. Some of the interventions used include a therapeutic/caring community, 12-step facilitation, Rational Emotive Therapy, Cognitive Behavioral Therapy, and Mindfulness Based Stress Reduction (MBSR). The clinical and psychological aspects of the treatment program are complimented with music & arts programming and outdoor recreation programs, while immersing participants in a farming community where everyone is focused on maintaining an unconditional positive regard for self, others and the earth. Residents help with livestock (cows, lambs and sheep, hogs, chickens, etc.) management including feeding, herding, relocation, and hygiene; hay baling and storage; maintenance efforts like firewood collection, irrigation systems management, fence repair and management; as well as machinery care and

maintenance, among many other responsibilities. Daily community meetings are a feature of the program, facilitated by addiction counselors and staff. In community meetings community strengths are addressed, community problem areas, individual step work and step progression, family dynamics, as well as open dialogue about progress and concerns for group members. Groups help the participants put love into action. They are taught assertive communication and how to demonstrate healthy boundaries/care with their peers. Other topics include shame, guilt, men's issues in recovery, sexuality, spirituality, grief, and loss.

First Step Farm (2020) began in 1976 for adult men and women with substance use disorders. There are typically approximately 45 residents. The goal of First Step Farm is to promote a resident's self determined efforts to recover from chemical dependency. Their focus is to restore the self-respect and esteem of the individual, helping to lead them to an understanding of their problem. Once this is attained, motivation towards sustained abstinence is sought, supported by positive influences from 12 Step self-help fellowships. The First Step Farm is a unique alternative treatment program utilizing a Work Therapy Program where residents train, learn new skills, and earn wages. In addition to learning about discipline, responsibility, and structure, most residents leave the Farm with enough money to re-establish themselves. Every resident is given the opportunity to establish responsible work routines and ethics. In addition, the Farm provides ample exercise and a balanced nutrition. All activities are coordinated in a community living environment centered around the 12 Step self-help fellowships of Alcoholics Anonymous and Narcotics Anonymous. First Step Farm operates a fully functional productive farm for Men and Women on two separate sites. Farming operations began in 1978 and greenhouse operations began in 1980. The Farm is a well-known supplier of vegetable plants and bedding flowers for the Southeast. Another feature of First Step Farm is their automotive

repairs shop that services minor repairs and conducts NC safety inspections for the community. Residents can obtain training and education to attain their Safety/IM Inspection Certification for the State of North Carolina. This allows them to fully inspect a vehicle at a licensed inspection facility. Training takes about a week in addition to the 8 hours of safety education and 8 hours of emissions education provided through AB Tech Community College. Residents learn an employable skill, obtain certification and are able to seek work following their treatment at First Step Farm.

Hine, Peacock, and Pretty (2008) find that individuals with substance use disorders that have completed programs on Care Farms in Europe have had improvements in physical and psychological health and social skills. Some changes in physical health include improved strength, increased appetite, becoming physically tired, and accomplishing hard work. Some psychological changes include increased self-confidence, persistence, personal investment of involvement, personal responsibility, self-awareness, and relaxation. Social skills benefits include re-socialization, increased responsibility, social contacts, and self-respect.

There are many benefits of Care Farms as discussed by Loue, Karges, and Carlton (2014). Data has shown that some of these are simply time and space for recovery. A connection to biological cycles of growth and animal breeding has been found to be therapeutic. Care Farms offer opportunities to engage in meaningful work as well. Gaining new relationships and vocational skills have also been found to be important outcomes of Care Farms. They also found that there were improvements in self-efficacy and declines in levels of anxiety and depression.

Outcomes at Care Farms seem to consistently point to the positive benefits to individuals with substance use disorders. Elings and Hassink (2008) note that individuals with substance use disorders overwhelmingly responded that after participating in a Care Farm program, they feel

that competitive employment was in their future because of the skills and changes the Care Farm instilled in them, versus their prior unemployment due to their substance abusing lifestyle.

Participants found that a job in the future gave them hope about financial independence, respect, social contacts, and general support that a job can facilitate. They found that people in these programs benefited from the structure of the Care Farms and having a job to do, the regularity of the work, the discipline it instilled, the responsibility they learned, and the ability to work in a group and be a team player. Program participants also reported that work on the farm gives them something useful to do, rather than engaging in substance abuse and that lifestyle. Program participation distracts them from their addiction. The work gives them a goal and takes the place of being at home all day or in the streets where the temptation to abuse drugs is strong. Physical work is tiring but the participants reported that it gave them a feeling of satisfaction. Participants told of the feeling of satisfaction, self-esteem, and self-respect they feel as a result of working on a Care Farm. Participants with substance use disorders also describe the high level of importance they place on having work which makes them feel like they are a part of society: it is important to them that they are doing work just like everyone else in their communities.

Hine, Peacock, and Pretty (2008) report outcomes from Care Farms for 72 respondents. Their findings include the dramatic increase in participants self-esteem as a result of working on a Care Farm. Several mood disturbances were assessed: anger, confusion, depression, fatigue, tension, and vigour. All had significant positive changes from the start of the research at the beginning of the individuals stay at a Care Farm to the end of their stay. Total Mood Disturbance was also significantly reduced after participation at the Care Farms. Migura, Whittlesey, and Zajicek (1997) report that participants significantly increased their global self-esteem and life satisfaction between pre-Care Farm and post-Care Farm participation. Richards and Kafami

(1999) researched with 33 substance abusing prisoners and found that vulnerability to addiction factors were significantly impacted by participation in the Care Farm. They also found that therapeutic vocational horticulture has an effect on individuals with substance abuse disorders in that growing crops without substances has a correlation in the minds of participants about how they can live their lives successfully without substances as well. This was a significant positive finding as reported in this study.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

Substance use disorders are a frequent occurrence in our society. Unfortunately, the impact that these issues have on individuals in their health, home, purpose, and community is profound. Although the inception of this disorder is complicated, scientists have clearly pointed to the biological mechanisms behind addiction. This points to a medical disorder at the heart of this matter.

Criminalizing addiction has only lead to overcrowding in our prison systems and disruptions in the lives of individuals and families. One issue that presents is the fact that incarceration often causes the individual to struggle to return to society and obtain gainful employment, due to a record of felonies. Employment options are so limited for former inmates that it is difficult for individuals with substance use disorders to repair health, home, purpose, and community.

Treatment options exist and these are utilized, but not as frequently as may be needed, given the scope of this issue. Two different options that may be used to support an individual's recovery from substance use disorders are Drug Court and Care Farms. Both offer a support network that can be very helpful in reinforcing recovery and helping maintain abstinence.

Drug Court has an extensive history and numerous studies which support it's efficacy in helping individuals with substance use disorders maintain abstinence and begin a more successful life with their health, home, purpose, and community. The process of Drug Court provides targeted counseling and sanctions if the offender breaks the rule of the court. Ultimately, individuals with substance use disorders can regain their self-esteem and sense of purpose enough to begin life again. The possibility of vocational success still exists as well,

because with successful completion of Drug Court, felony convictions are overturned. And since employment is so often limited by felony convictions, this can be a solid benefit to Drug Court participants as they move away from a life of addiction into the world of work.

Therapeutic Communities have been established to support recovery from substance use disorders over the long term. Care Farms are a version of these Therapeutic Communities. Evidence supports Care Farms as viable options to increase an individual's self-esteem and skill set for employment. The work performed at Care Farms can prepare individuals as they repair their connections to health, home, purpose, and community.

Care Farms are very popular in Europe and have been proven a viable option to prepare individuals with substance use disorders to engage in the world of work. There are a few such Care Farms in the US and these have extensive programs that support people with substance use disorders to have long-term abstinence. The work skills developed at Care Farms are coupled with the emotional support received there can make a drastic impact on an individual's future employment.

Drug Court and Care Farms both support individuals with substance use disorders towards long-term abstinence, which in turn affords the person the ability to engage in employment. These two paths have a common purpose, but very different applications. Drug Court overlays severe penalties for relapse and Care Farms can have cause for dismissal from the program, but overall the ongoing support from either of these programs can help an individual restore health, home, purpose, and community. Care Farms directly use vocational horticultural therapy as an intervention to restore and individual's life. Drug Court focuses on counseling and engagement in work, school, or community service to help individuals towards success.

Overall, both interventions have applications in our society however per this discussion,

the most holistic support comes from Care Farms. In the long run, it depends on the individual and their needs as to which program may be more effective in aiding the individual to long term abstinence and thus the ability to work. Ultimately, prior experience and the life course of each person defines what intervention will be effective in providing the support needed to help an individual as they regain health, home, purpose, and community.

Future study in this field might include further research into the long-term effect on vocational outcomes for both Drug Court and Care Farms. This is especially true for Care Farms. There has been insufficient research on Care Farms effectiveness as a vocational therapy intervention. This may build a line of evidence that supports these interventions and lead to greater funding and awareness for both. Advocacy is also important, and both need increased exposure in the public eye so people are aware of these options to support substance abuse recovery.

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