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EVALUATION OF THE IMPACT OF THE NEW JERSEY ACCESS
INITIATIVE MENTORSHIP PROGRAM ON DRUG USING BEHAVIOR
IN CLIENTS WITH OPIATE DEPENDENCE

by
Jennifer Ingegneri

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
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Approved by _____
Advisor

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ABSTRACT

Jennifer Ingegneri

EVALUATION OF THE IMPACT OF THE NEW JERSEY ACCESS INITIATIVE MENTORSHIP PROGRAM ON DRUG USING BEHAVIOR IN CLIENTS WITH OPIATE DEPENDENCE

2006/07

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Master of Arts in Mental Health Counseling and Applied Psychology

This study was conducted to examine the relationship between mentoring services and reported illicit drug using behavior for opiate-dependent individuals. Data used in this study were part of a larger project by New Jersey Access Initiative (NJAI). Participants were 2,424 individuals were addicted to opiates. Results indicated that none of the participants reported receiving mentoring services. In addition, large amounts of incomplete and missing data in the dataset made statistical analyses impossible. Instead, descriptive results on drug usage, living conditions, education, employment, and social support are described. Implications regarding how mentoring services could have impacted participants' drug use are also examined. In addition, limitations and problems conducting the study are explained.

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CHAPTER ONE

INTRODUCTION

Despite the increasing attention given toward interventions for opiate addiction, opiate dependence and abuse remain significant problems. A ten-year study from 1988-1998 by the Office of the National Drug Control Policy (2000) estimates that there are 980,000 opiate-dependent individuals in the United States. Opiate abuse is especially prevalent in the Northeast region of the country. According to the 2003 New Jersey Department of Human Services Household Survey on Drug Use and Health (Division of Addiction Services, 2005), rates of heroin abuse in New Jersey are higher than in the rest of the country. Results from the survey found that New Jersey residents reported a 5% lifetime prevalence rate of heroin abuse compared with 2% of Americans nationwide.

These percentages are unfortunate, since opiate dependence is often associated with negative life consequences. Mortality rates are estimated to be between 1.5%-2% per year due to overdose and injuries related to opiate use (American Psychiatric Association (APA), 2000). Because opiates are often used intravenously, diseases such as tuberculosis, human immunodeficiency virus (HIV), and hepatitis are also common (APA). Symptoms of opioid intoxication can also lead to social problems, such as divorce and unemployment. Lastly, opiate abuse often leads to high financial costs to the

community due to services such as detoxification treatment (APA) and criminal justice care (Schottenfeld, Pantalon, Chawarski, & Pakes, 2000).

Because of the significant effects of opiate abuse, researchers have been trying to create interventions that aid in achieving abstinence. Interventions are especially important due to the increasing admissions to treatment facilities for primary opiate dependence. According to the Treatment Episode Data Sets (TEDS) treatment admissions, heroin admission rates in the U.S. have increased by 45% from 1992 to 2002 (Department of Health and Human Services, 2002). A majority of opiate abusing individuals is referred to methadone maintenance programs, a type of pharmacological intervention (U. S. Substance Abuse and Mental Health Services Administration (SAMHSA), 1992). Methadone hydrochloride is a synthetic opiate commonly used to treat opiate addiction for detoxification. Methadone works by occupying brain receptor sites that are affected by opiates (SAMHSA). The result is that it prevents withdrawal symptoms and blocks the effects of opium. Methadone maintenance treatment is the most widely used treatment for opiate dependence because it fulfills addicts' physical need for opiates, but produces less sedation and has longer effects than illicit opiates (Department of Health and Human Services, 2002). Methadone is typically administered in small doses on a daily basis to fight withdraw effects of opiate use, thereby facilitating abstinence.

Methadone Maintenance Programs

Research on the effectiveness of methadone maintenance programs on opiate use is mixed. Some studies suggest that methadone maintenance programs are an effective

treatment in reducing illicit opiate use. Langendam, Van Brussel, Coutinho, and Van Amerijden (2000) found that increased doses of methadone per year for outpatients were associated with decreased injecting behavior. A study by the Drug Abuse Treatment Outcome Study (DATOS) also found a decrease in the number of weekly heroin uses in outpatients who had undergone methadone maintenance programs for one year (Hubbard, Craddock, Flynn, Anderson, & Etheridge, 1997), suggesting that methadone maintenance treatment can have long-term beneficial effects. Some randomized controlled trials have also indicated that methadone maintenance programs are superior to both control conditions (Gunne & Gronbladh, 1989) as well as to placebo (Strain, Stitzer, Liebson, & Bigelow, 1993). However, there are wide variations in efficacy rates for methadone programs. Success rates of reduced opioid use by methadone treatment vary from 36% to 73% (Marsch, 1998; Strain et al., 1993). In a meta-analysis, Marsch (1998) reported that methadone maintenance treatment was moderately successful in reducing opiate use.

Similar results exist for methadone maintenance success rates on reducing problems associated with opiate use, such as crime. Lind, Chen, Weatherburn, and Mattick (2005) examined effectiveness of methadone treatment in preventing crime. The authors examined court records of participants from 1999-2000 and compared their crime levels when on and off methadone. Results indicated that crime rates were significantly lower when clients were participating in methadone maintenance programs.

Unfortunately, no long-term follow-up was conducted. Therefore, whether some participants relapsed into crime after the methadone treatment ended is unknown. Results from a meta-analysis (Marsch, 1998) that examined 24 studies of the effect of methadone

treatment and criminal activities indicated that methadone maintenance has a significant effect on reducing drug related crimes but not non-drug crimes.

Literature is scarce regarding the effectiveness of methadone programs on employment rates. The Drug Abuse Treatment Outcome Study (DATOS) conducted an outpatient methadone treatment evaluation that examined long-term effects of methadone maintenance programs (Hubbard et al., 1997). Results indicated there was no significant change in unemployment rates while participants were in treatment.

Methadone maintenance programs have also been shown to reduce HIV and other health risk behaviors among clients in treatment. Ball, Lange, Myers, and Friedman (1998) conducted a three-year study of intravenous (IV) drug use and needle sharing among heroin addicts in three different methadone maintenance programs. Results indicated that up to 71% of participants still in treatment ceased IV use. However, there were differences between programs in effectiveness. Results seemed to depend more on participants' length of stay in treatment, implying that clients must remain in treatment in order to achieve any benefits from methadone programs. Meta-analytic results suggest that methadone maintenance programs have a small to moderate success rate for decreasing HIV risk, implying there is room for improvement (Marsch, 1998).

Although research has indicated that methadone maintenance programs have some success in decreasing opiate use and other problems associated with opiate abuse, several factors limit the effectiveness of methadone maintenance programs. One problem concerns the literature on methadone programs. Most studies only track participants who remain in treatment. For methadone maintenance to be effective, twelve or more months

of treatment is needed (Langendam et al., 2000). However, methadone maintenance programs often suffer from low treatment retention. A majority of methadone maintenance clients end treatment before the one-year mark for a variety of reasons. For example, clients may drop out because of discomforting side effects. One study reported that four participants dropped out because of extreme nausea from taking methadone (Fischer, Rehm, Kim, & Kirst, 2005). The routine of methadone maintenance requirements can also be un motivating, increasing risk of dropout (Meyers, Villanueva, & Smith, 2005).

A second problem associated with methadone maintenance programs is that there is often a high rate of concurrent drug use while participants are in treatment for their opiate dependence. Anglin, Almog, Fisher, and Peters (1989) found that clients in methadone maintenance treatment drank more alcohol to compensate for their lack of heroin. Similarly, Kosten, Rounsaville, and Kleber (1987) found a high level of subsequent cocaine abuse for some clients even while they were receiving methadone maintenance for opiate dependence.

Third, methadone maintenance programs do not appear to benefit every type of opiate-addicted client, which may help explain the range of success rates. Specifically, clients who are older, have higher psychosocial functioning (Farrell et al., 1994), and less severe addiction tend to gain benefits (Marsch, 1998). However, it is equally important to serve those who have low psychosocial functioning, are younger, and have more severe addictions.

Problems such as low retention and premature termination frequently lead clients to relapse (Marsch, 1998). Opiate dependence is often a chronic relapsing disorder (Silverman et al., 2002). Therefore, opiate addicts are likely to relapse even after long periods of abstinence. For example, one study found that heroin addicts reported less abstinence and higher rates of relapse than users of other drugs (Downey, Rosengren, Jackson, & Donovan, 2003). Heroin addicts may even have the potential to relapse after remaining abstinent for as long as 15 years (Hser, Hoffman, Grella, & Anglin, 2001).

Due to the limitations of methadone maintenance programs, many pharmacological approaches are often either combined with or replaced by psychosocial interventions. Vouchers incentive programs have been one common drug-free treatment approach to opiate addiction, in which clients are rewarded with monetary vouchers for negative urine screens. Vouchers can then be exchanged for items in the community (Katz, Chutuape, Jones, & Stitzer, 2002). This method is used in order to provide an incentive for clients to remain sober without relying solely on medication. However, drug-free programs also face challenges (Katz et al.). For example, the cost of providing concrete rewards and setting up voucher incentive programs is a barrier to using contingency management more often than it has been used (Carroll & Onken, 2005). Benefits of contingency management also often decrease after rewards are terminated (Carroll & Onken). Drug-free programs also tend to suffer from poor retention, while prolonged and intense withdraw symptoms might add to premature termination and relapse (Katz et al., 2002).

Perhaps the most significant difficulty leading to relapse that affects both methadone maintenance and drug-free programs involves clients' social surroundings. After program completion, clients are often thrust back into a social environment that reinforces drug abuse (Kidorf et al., 2005). For this reason, even clients who complete treatment successfully may relapse because they return to an environment that is unsupportive of their sobriety. Therefore, it is becoming increasingly clear that drug treatment cannot solely treat the drug use independent of the social environment. Rather, identifying somebody outside of treatment who is knowledgeable about the drug treatment process may help the client with recovery.

One approach that may be beneficial for an opiate-dependent population is a mentorship model. Under this model, opiate-dependent clients are assigned a recovery mentor as part of the treatment process. Recovery mentors are intended to promote clients' sobriety by providing emotional support and encouragement to participate in drug-free community activities. Mentors also play the role of facilitator by assisting with referrals to other appropriate social networks, such as 12-step models or community events, to help the client with recovery. The rationale for the recovery mentor model for opiate addiction can be understood through several other community and mentor models, such as the Community Reinforcement Approach (CRA; Hunt & Azrin, 1973), career mentoring, youth-based mentoring, and 12-step sponsorship.

Community Reinforcement Approach (CRA)

One model from which the recovery mentor model can be conceptualized is through the Community Reinforcement Approach (CRA; Hunt & Azrin, 1973). CRA is a

cognitive-behavioral approach originally developed to treat individuals with alcohol addiction. However, CRA has more recently been adapted toward clients using illicit drugs, such as opiate dependence (Smith, Meyers, & Miller, 2001). The rationale behind CRA is that individuals' recovery from substance abuse is influenced by their social environment. Many opiate dependent individuals relapse soon after being released from detoxification treatment because they enter back into a social environment that reinforces their previous drug-abusing ways. For instance, clients may regain contact with past friends who use drugs. Therefore, CRA uses reinforcers from the person's community in order to promote abstinence. Examples of reinforcers are family, work, and organized groups or professionals. The goal is to restructure the individual's life around new drug-free activities so that sobriety is more reinforcing than substance abuse (Meyers, et al., 2005).

CRA involves various components that can be focused on according to each client's particular needs. One common component involves social and recreational counseling. In this component, the counselor or helper assists the client in engaging in novel social activities that promote a sober lifestyle. Examples of social activities are a social club, a 12-step program, or a mentor. Another component involves aiding clients with job skills, such as filling out applications and sharpening interview skills.

Individual components have been investigated for their impact on substance abusers. For instance, studies regarding effects of the social club with alcohol-abusing individuals have found that clients who were encouraged to attend drug-free social

gatherings drank significantly less than participants in standard counseling (Mallams, Godley, Hall, & Meyers, 1982).

Another CRA component that has been studied is the job skills component. Azrin and Philip (1982) examined the relationship between developing job skills and abstinence rates in substance abusers. Job club participants received assistance in writing a resume, developing interviewing skills, and completing job applications. Control group participants received information about the job club. Results indicated that 95% of participants in the job club condition became employed versus 28% in the control group. Participants in the job club condition also reported a higher rate of abstinence than those in the control condition.

More recently, CRA has been tested specifically on individuals with opiate addiction. Results of studies suggest that CRA is superior to traditional drug counseling when combined with voucher incentives (Bickel, Amass, Higgins, Badger, & Esch, 1997; Katz, Gruber, Chutuape, & Stitzer, 2001) or used by itself (Abbott, Moore, Delaney, & Weller, 1998). Especially helpful aspects in promoting abstinence seem to be emotional support, job skills training, and engaging in social activities. Abbott et al. (1998) examined the efficacy of CRA versus standard counseling in opiate-dependent individuals without the use of voucher incentives. Participants were 180 outpatients who were on methadone maintenance. Clients were randomized to one of three treatment groups: standard counseling, CRA, and CRA with relapse prevention. Standard treatment consisted of counseling once per week and advice on job skills and drug use. Clients in the CRA conditions received job counseling, instructions on consequences of opioid use,

and developmental recreational activities. Results indicated that significantly more participants in the CRA conditions reported less drug use behavior on the Addictions Severity Index at the six-month follow-up. Significantly more participants in the CRA conditions also achieved three or more weeks of opiate abstinence, which surpassed abstinence levels from standard drug counseling. These results support the benefits of adding CRA strategies to the treatment of clients who are dependent on opiates. Studies have also shown that CRA seems to enhance methadone maintenance treatment when the two programs are combined (Abbott, Moore, Delaney, & Weller, 1999).

Not all literature has supported CRA components as being superior to standard addictions treatment. Schottenfeld et al. (2000) compared outcomes for participants with combined opioid and cocaine dependence. Participants were treated in a clinical trial with group drug counseling or in a current trial with CRA. The study also examined the association between engagement in non-drug related activities and abstinence. Contrary to their first hypothesis, results indicated that CRA was not more effective than drug counseling for treating clients with combined opioid and cocaine dependence. One reason for this finding is that there is greater difficulty in achieving abstinence from two drugs (Schottenfeld et al.). Another possible reason is that the drug counseling condition involved some CRA components, such as emotional support. Therefore, social support and positive reinforcement of non-drug activities seem to be critical elements in promoting success for drug addiction. However, CRA has only recently been applied to clients with opiate addiction (Meyers et al., 2005). Therefore, positive effects can only be considered tentative until more studies are completed.

Career Mentoring

To obtain more insight about how a mentorship model can benefit opiate addicts, a career mentoring model can also be used. Most literature on structured mentoring programs have been done on other models besides recovery, particularly career mentoring (Bramson, 1999). Although career mentoring has been used to reach career-oriented functions, this model contains valuable components that can also be used for drug addiction. This model operates through the social learning theory of career counseling (Zunker, 2002, as cited in Bramson, 1999). The theory holds that protégés learn best when interacting with others who have undergone similar experiences. This learning process is accomplished through modeling (McDowall-Long, 2004). Mentees acquire new information by watching and reacting to their mentors. Mentees can then adopt this information for their own use at a later time. Under this model, the mentor takes on the role of expert to the new employee (Bramson, 1999). As the expert, the mentor provides information about job skills that are necessary to excel in the career force. For example, a career mentor may provide background information about the job, and educate a protégé about what skills are needed to obtain occupational success.

Besides education, another role of career mentors is to help protégés set and meet goals. A collaborative process is formed between mentor and protégé in order to develop strategies to reach short-term and long-term goals (Bramson, 1999). Mentors then help protégés meet their goals and objectives related to job satisfaction. While trying to reach goals, the career mentor also acts as a problem-solver to overcome obstacles blocking the protégé's path to success (McDowall-Long, 2004).

Studies examining career mentoring have indicated that this model produces benefits for protégés. Liang, Tracy, Taylor, and Williams (2002) found that mentors improved mentees' career opportunities by coaching protégés through information, advice, and feedback. This strategy ultimately improved mentees' decision-making skills and increased rates of promotions.

Besides fulfilling career-oriented functions, career mentors also serve psychosocial functions for protégés (McDowall-Long, 2004). For example, Liang et al. (2002) found that protégés in mentoring programs demonstrated improved interpersonal and psychosocial adjustment to life transitions. Mentors may teach protégés valuable relationship skills that they can generalize to other life areas, such as coping skills. Wilding, Marais-Strydom, and Teo (2003) conducted a case study that examined the beneficial effects of Mentor Link, a structured mentoring program from the Australian Association of Occupational Therapists. Results indicated that the mentee developed communication and coping skills that could be applied to future professional and personal situations.

Mentoring may also be superior to other traditional forms of job coaching in strengthening social skills in novel situations. Lee, Storey, Anderson, Goetz, and Zivolich (1997) compared effects of three training strategies on social integration for restaurant employees with disabilities. New employees were assigned to a traditional job coach model, a mentoring model, or a management training model. Results indicated that employees with disabilities who were placed in the mentoring model had more

interactions with nondisabled coworkers than those in traditional models. These results suggest that mentoring helps protégés strengthen their social relationships.

Youth-based Mentoring

Besides CRA and career mentoring, which focus on adults, mentoring services have also been widely used with a youth based population. Contributions from this model consist of companionship and emotional support from mentors. Studies suggest that mentoring is an effective method in helping youth decrease substance abuse and behavioral problems. The Big Brothers/Big Sisters program is a type of mentoring service aimed toward youth. In this program, community volunteers serve as mentors to a child who is thought to be “at risk” for a social or clinical problem (Bramson, 1999). Problems may involve low self-esteem, anger, substance abuse, loneliness, or deficient communication skills. Mentors then meet one-on-one with their assigned child to provide companionship, emotional support, and encouragement to the child.

Similar to career counseling, mentors from the Big Brothers/Big Sisters program may teach the child new skills in order to build self-esteem. For instance, a mentor may help a child learn how to play football or strengthen reading skills. Mentors in this program also help the child engage in risk-free activities, thereby reinforcing positive behavior. Studies investigating the Big Brothers/Big Sisters program indicate that the mentoring service is associated with behavioral benefits. Frecknall and Luks (1992) assessed parents’ impressions of the level of impact that the Big Brothers/Big Sisters program had on their children. A majority of parents reported that their children received intrapersonal, interpersonal, and educational benefits. Parents stated that their children

had an increase in self-esteem, improved relationship and coping skills, and higher grades.

Youth mentoring programs may also help decrease illegal drug use. When Grossman and Tierney (1998) compared children in the program to a control condition, children in the Big Brothers/Big Sisters program were significantly less likely to use illicit drugs and alcohol. Similar success has been obtained by other youth mentoring programs besides the Big Brothers/Big Sisters program. Aseltine, Dupre, and Lamlein (2000) examined the effectiveness of mentoring as a strategy for drug prevention in a program called Across Ages. Across Ages is a drug and alcohol prevention program that matches youths with older adults, who serve as mentors. Mentors provide emotional support, encouragement, and companionship during weekly meetings. Youths were assigned to either the Across Ages mentoring program, a school-based life skills curriculum, or community service activities. Results indicated that mentoring by older adults was associated with lower levels of substance use and problem behavior.

12-Step Sponsorship Model

Besides community youth, the benefits of mentoring can also be extended to clinical populations. Another model in which recovery mentorship can be understood is through a 12-step sponsorship model. Peer mentoring can be considered a form of sponsorship, in that mentors provide social support to clients in recovery (Bramson, 1999). Sponsors share some common roles with those of mentors. For instance, sponsors provide social support to help clients handle new life challenges that come with their recent sobriety, such as loneliness, isolation, and depression. Like CRA, sponsorship also

acts as a drug-free activity for clients to engage in to further reinforce abstinence (Bramson). For example, individuals in Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) may meet with their sponsors instead of attending bars or socializing with drug-associated peers.

Having a sponsor is associated with increased likelihood of abstinence. Caldwell and Cutter (1998) examined what variables were associated with attendance and abstinence in Alcoholics Anonymous. Results indicated that having a sponsor contributed to attendance and abstinence. Similar results were obtained by a study that investigated the role of mentors in completion of a halfway house program (Huselid, Self, & Gutierrez, 1991). Therefore, the role of sponsors is a beneficial part of the 12-step recovery treatment package.

Besides offering support, sponsors also provide information to clients (Bramson, 1999). For instance, they may educate clients on the disease of addiction. Sponsors may also provide information about other available community services to help clients in their recovery. In addition, sponsors may also work with the community and AA in order to encourage the mentee's recovery (Bramson).

Mediating Factors in Mentoring

Despite the abundance of literature demonstrating the benefits of mentoring, not all studies have found a relationship between mentoring and abstinence from drugs and alcohol. For example, a study by Crape, Latkin, Laris, and Knowlton (1999) found that having a NA/AA sponsor was not significantly associated with successful abstinence for heroin users. One reason why some studies have failed to find an association between

mentoring and abstinence is because the relationship between mentoring and success may be mediated by certain factors. One of these factors is the length of time clients spend in mentorship programs. Specifically, research indicates that longer lengths of mentoring are associated with better outcome. Grossman and Rhodes (2002) examined the association between the length of mentor-protégé relationships and outcome in career development for youths enrolled in mentoring programs. Results indicated that there was a significant positive relationship between the length of mentorship and positive outcome.

Another mediating factor between mentoring and improved outcome may be frequency of contact between mentor and client. Frecknall and Luks (1992) found an association between success in the Big Brothers/Big Sisters program and frequency of contact. Specifically, clients who met more often with their mentors experienced greater benefits. Kaskutas, Morgan, and Vaeth (1992) found similar results when they examined the role of mentorship and outcome in youths with substance abuse and behavior problems. Youths who regularly met with mentors on a weekly basis reported more success with the program. This result was true even for clients who were at higher risk for substance abuse.

New Jersey Access Initiative Recovery Mentorship

Benefits of mentoring demonstrated in CRA, career mentoring, youth mentorship models, and sponsorship models could potentially transfer to recovery settings for opiate dependence. The mentorship service through the New Jersey Access Initiative (NJAI) incorporates several components from the mentorship models previously discussed. NJAI is a voucher program through the Division of Addiction Services (DAS) that is designed

to enhance standard treatment for addictions. NJAI provides various services to individuals with opiate dependence living in the state of New Jersey. After undergoing an intake screening, clients are given a voucher to receive an addictions assessment. Clients choose which of the various referral sources to attend for the assessment and detoxification program. Clients are also linked to recovery mentor services directly after assessment, in which they are assigned a recovery mentor to aid them in their recovery. Mentors are required to have experience with addiction either personally or through a significant other. During sessions, recovery mentors help clients cope with issues that could potentially lead to relapse. Duties include providing companionship, support and encouragement, supplying information to clients about their addiction and local community services, helping clients link with other drug-free community events, and working with treatment providers to support the client's treatment. Client progress is tracked by follow-up Status Interviews. The Status Interviews serve as tools for the Government Performance and Results Act (GPRA).

Recovery mentors through NJAI perform five specific functions, which encompass duties from other mentorship models. The first function of NJAI mentors is to provide individual mentoring with clients. This function involves duties such as providing companionship and emotional support. It also involves encouraging the client to participate in treatment and other community activities, such as job training programs. Companionship and emotional support are roles common to all mentoring and sponsorship models. One main role for a mentor is to act as an empathetic listener so as to foster a trusting and caring relationship (Bramson, 1999). Companionship is a role

especially used in mentorship models for youths, such as the Big Brothers/Big Sisters program. In the program, older individuals spend time with an assigned child by talking with them and participating in activities to promote positive behavior. Similarly, recovery mentors may spend sessions by having conversations with their clients or engaging in activities that promote sobriety. Research on youth mentorship models has indicated that mentoring can provide beneficial effects on clients. Therefore, recovery mentors may also provide benefits to opiate addicts through companionship.

Activities in some of the CRA components are also those in which recovery mentors can participate. Literature on CRA has suggested that having a supportive environment can promote and help maintain sobriety. Therefore, recovery mentors may benefit opiate-dependent clients by acting in a caring and supportive manner during their recovery process. In this way, mentors can serve as one type of social activity to promote sobriety. For instance, a client may meet with a recovery mentor instead of interacting with drug-using peers. Recovery mentors can also encourage clients' participation in CRA activities, such as social and recreational counseling.

Another component of CRA involves aiding clients with job skills. Likewise, recovery mentors can help clients build resumes, fill out applications, and sharpen interview skills. Mentors can also encourage clients to participate in the job club, which is a CRA component (Smith et al., 2001). Recovery mentors can also aid with the CRA component of relapse prevention. For instance, mentors can be especially beneficial to clients in this regard by being a source of emotional support to guard against relapse.

Recovery mentors can be a valuable support system for recovering addicts, since they have personal experience with substance abuse.

A second function performed by NJAI recovery mentors involves providing information to clients about issues such as the nature of addiction, and other available community services. The 12-step sponsorship model also educates clients about their addiction. For example, this model views addiction as an incurable disease (Bramson, 1999). Sponsors then help clients recognize that they are not to blame for their addiction. In the same way, recovery mentors can use first-hand experience to impart knowledge to clients about reasons for their addiction. They can explain about addictive properties of the drug, as well as how substances are absorbed in the body. Mentors can also conceptualize how the drug's sedative effects maintain the client's addiction. For instance, a mentor may help a client understand how the client's environment plays a role in maintaining the opiate addiction.

The career mentorship model also contributes to the role of teaching and providing information. A major role of career mentoring involves educating the protégé about how to build necessary skills for occupational success. This teaching component can transfer to recovery settings. Just as research has shown that career mentoring helps clients attain professional goals more easily, recovery mentors can help opiate-dependent clients with reaching recovery goals. For example, a mentor may help clients build skills for success in recovery by educating them about how to avoid triggers that lead to drug use.

Besides imparting career-oriented information, career mentoring can help build necessary life skills. Research suggests that career mentoring often improves protégés' psychosocial skills. For instance, mentors may teach protégés coping skills, and brainstorm about how to overcome obstacles impeding their job success. Similarly, a recovery mentor can act as a problem-solver to overcome barriers that may stand in the way of a client's recovery.

A third function is for mentors to work with the Administrative Lead Agency (ALA) and the community to support and facilitate referrals for support services for clients. This function is also similar to career counseling. For example, a career mentor may engage in networking with other company managers in order to help the protégé build a springboard for success (Bramson, 1999). Similarly, recovery mentors can use their own past experiences to network clients to other support systems. For instance, a recovery mentor may feel that a client would benefit from a 12-step program or social club through CRA. The mentor can then use his or her own contacts to help the client obtain needed services.

The fourth function for recovery mentors involves working with treatment providers to support and encourage clients' treatment. This function contains influences from CRA. CRA involves family, friends, and the community in conceptualizing the client's situation and promoting recovery. In the same way, recovery mentors can stay in touch with counselors to discuss the client's progress and any problems they may be facing.

Last, mentors are required to complete a mentoring training, called the New Jersey Substance Abuse Monitoring System (NJ-SAMS) NJAI module. Training is common to other forms of structured mentoring programs. For example, mentors in the Big Brothers/Big Sisters program participate in an orientation and training about mentoring, child development, and expectations about the program (Bramson, 1999). Like sponsorship models, recovery mentors have first-hand experience with substance abuse. However, one difference is that sponsors are not formally trained. Rather, sponsors are considered experts only because of their past history with substance abuse (Bramson). This distinction may lead to differences in outcome in the literature. Therefore, studies that investigate the effects of recovery mentoring on clients with substance abuse are still warranted.

Although the NJAI recovery mentor program shares similarities with other mentorship and sponsorship models, no empirical study has been found which examines how participating in a mentoring program can influence illicit drug using behavior in an opiate-dependent population. Given the high relapse rate and increasing rates of opiate abuse, mental health practitioners need to develop interventions that are both helpful and efficient. A mentorship model may be a beneficial approach in maintaining sobriety and helping opiate-addicted clients develop more healthy and rewarding lifestyles. Mentoring has been demonstrated to provide benefits in CRA, career mentoring, youth programs, and 12-step models. Therefore, it seems that a mentorship model for clients addicted to opiates would be worth implementing.

The present study was designed to examine the relationship between recovery

mentoring through NJAI services and clients' reported illicit drug behaviors. Specifically, this study contained two hypotheses. First, it was hypothesized that clients who receive mentorship services will report a decrease in illegal drug using behavior, as measured by their Status Interviews at the end of the six-month service. As per the research literature, it was also hypothesized that clients who have more frequent contact with their recovery mentors during the six-month period will also report greater decreases in illegal drug use on the six month follow-up Status Interview than clients who have less frequent contact with their mentors.

CHAPTER TWO

METHOD

Participants

Participants consisted of opiate-dependent individuals who were admitted to the New Jersey Access Initiative (NJAI) program as part of the NJ Department of Human Services (DAS), Division of Addiction Services. NJAI is a three-year, drug-free treatment program for opiate addiction over a three-year period, with a goal of eventually serving a total of 4,710 opiate-dependent individuals. The program is offered throughout the state of New Jersey, but specifically targets people in Camden, Trenton, and the Greater Newark areas. All participants were already receiving traditional drug treatment at the time they enrolled into the study, as NJAI is a program designed to complement standard treatment. To ensure eligibility, clients voluntarily entered the service through a brief screening. The screening was provided via telephone by the Addictions Hotline from Center of Family Services, a treatment provider, a community or faith-based organization, or from the privacy of the client's home. To be included in the study, participants had to meet several criteria. Individuals needed to meet the criteria for opiate addiction using the above screening. Individuals also needed to be New Jersey residents and be 18 or older. Last, individuals had to be enrolled and participating in a traditional drug treatment center. Individuals were excluded if they lived out of the state of NJ, did

not have an addiction to opiates, or were not currently in traditional drug treatment. If eligible for the study, clients received a voucher to receive an assessment from the Center for Family Services, who served as the Administrative Lead Agency (ALA) for the NJAI program. Assessments were conducted in the form of Status Interviews to determine diagnoses from the *Diagnostic Statistical Manual of Mental, Fourth Edition, Text Revision* (DSM-IV-TR; APA, 2000), level of care needed, and psychosocial needs.

Intervention

This study examined the effects of a recovery mentor service that was part of a larger program by NJAI. As part of the program, participants were assigned a recovery mentor to aid in recovery from their opiate addiction. Participants were issued a recovery mentor voucher and chose a mentor from a list of community, faith-based, and treatment provider agencies that had been approved by the NJAI Provider Network. Although they were able to choose what agency their mentor came from, the sex of the mentor had to match that of the participant. Participants were required to activate the voucher within 30 days of being issued. The treatment provider then contacted the ALA to initiate the voucher for a six-month period. The expiration date was extended on a case-by-case basis if needed and if funds were not expired. The maximum value of a voucher was \$1,500 over the six-month period.

After assigned, recovery mentors began services immediately after participants completed the initial assessment. Participants who did not complete the initial assessment within the scheduled timeframe were not eligible to receive mentorship services, and vouchers were retracted. Level of service provided by recovery mentors varied dependent

on whether participants were receiving inpatient or outpatient care. Mentors were available to provide services up to two hours per week for outpatient or partial care participants. For residential and halfway house clients, mentors were available for two hours per month. Mentors were allowed to begin increasing their service hours to two hours per week, three weeks before clients were discharged from a residential setting. Mentors were paid \$30 an hour for services, billed in 15-minute increments. Recovery mentors were allowed to mentor more than one client if desired, but no more than ten.

Mentors were hired to provide additional services and support to participants while in drug treatment in order to deal with issues that could potentially lead to the participant's relapse. Specifically, mentors performed five functions. The first function involved individual mentoring. This duty included tasks such as providing companionship and emotional support. It also involved encouraging participants to engage in treatment, job programs, or self-help groups in the community. The second function provided by recovery mentors was to provide information and knowledge to clients. For instance, mentors were expected to educate participants on the disease of addiction, and network them with community services and self help groups. The third function involved working with the community and ALA to support clients and facilitate referrals for appropriate services for participants. As part of working with the ALA, mentors administered ongoing client assessments in the form of Status Interviews via telephone to track client progress. As a fourth function, mentors also worked with treatment providers, such as participants' counselors, in order to encourage the client's treatment. The fifth function of recovery mentors included completing mentor training

programs. All mentors completed a New Jersey Substance Abuse Monitoring System (NJ-SAMS) training, as well as training focused on ethical and boundary issues. Mentors also completed a Training Institute to earn Clinical Alcohol and Drug Counselor (CADC) credits.

In addition to completing trainings, recovery mentors also were required to meet other qualifications. Mentors were required to have experience with substance abuse, either directly or from a family member or significant other. They also had to have at least two or more years of sobriety in order to be eligible to become a recovery mentor. A high school diploma or GED was also required. Last, mentors were also required to undergo a criminal history check.

To ensure that recovery mentors were spending their time appropriately with clients, NJAI Recovery Mentor service providers engaged in regularly scheduled task supervision with mentors. Mentors were required to document all face-to-face and phone interactions with clients and discuss it during supervision. Mentors were also provided with supportive supervision via individual and/or peer reviews of cases. Mentors were monitored to help ensure that proper ethical relationships with clients and service providers were being held, as well as to help guard client confidentiality.

Measures

The NJAI Status Interview was used as a tool to collect Government Performance and Results Act (GPRA) data on study participants. The Status Interview is a 74-item questionnaire that covers nine life domains. The Record Management domain (Section A) includes client and intake identification numbers, grant identification number, interview

date, type of interview, and number of the interview. The Drug and Alcohol domain (Section B) examines the participant's use of drugs and alcohol in the past 30 days. The Family and Living Conditions domain (Section C) asks about current living conditions, number of children, and custody information. The Education, Employment, and Income domain (Section D) examines the participant's educational history and current employment status. The Criminal Justice domain (Section E) examines the client's involvement with the criminal justice system in the past 30 days, including arrests and incarcerations. The Social Support and Recovery domain (Section F) examines the client's involvement with social supports, such as self-help, recovery mentorship, and family and friends. The Service domain (Section G) examines the number of days or sessions of services provided to the client since the last Status Interview was conducted. The Demographic Information domain (Section H) includes voluntary information such as race, ethnicity, gender, and date of birth. The Discharge Information domain (Section I) includes the date and reason why the client was discharged from the program.

Status Interviews are completed at intake, 30 days after intake assessment, every 60 days thereafter, and at discharge. Sections are completed according to when during the program the Status Interview is being administered. Intake assessments require completions of all sections except G and I (Service and Discharge Information, respectively). Sections A-G are completed during each Status Interview following intake, and sections A-I are required to be completed at discharge. Section A is transferred from information at time of the intake assessment and is completed by the interviewer. Items from Sections B-F, H, and I are asked of the client when appropriate. Section G is

designed to be completed by the person administering the Status Interview with help from the treatment provider.

Procedures

This study examined research data collected as part of a larger drug-treatment program by NJAI. Data for this study was obtained from a preexisting data set from client Status Interviews. To examine illegal drug use, the researcher examined Question 2 of section B (Abstinence from Drug and Alcohol Use) of the client Status Interview. This section evaluated how many days the participants reported using illegal drugs in the past 30 days. This section also evaluated what types of illegal drugs were used. Drug categories that were examined in the study included: cocaine and crack, marijuana, heroin and other opiates, hallucinogens and psychedelics, methamphetamine and other amphetamines, benzodiazepines, barbiturates, ecstasy and other club drugs, ketamine, inhalants, and other illegal drugs. Answers to these questions were evaluated for intake and discharge Status Interviews, or when mentorship services ended for the participant. To test the hypothesis that NJAI mentorship services would result in reported decrease in illegal drug using behavior, data from these two time periods were then compared to evaluate changes in drug behavior.

To measure frequency of contact, Section G (Service Domain) of the Status Interview was used. Recovery mentors were allowed to provide up to two hours of services per week for outpatient participants. Inpatients received two hours per month. Mentors were required to document all face-to-face and phone contact with clients throughout the mentorship. The researcher examined the data summarizing how

frequently clients stayed in contact with their recovery mentors. Specifically, the Number of Sessions for Question 25 (*recovery coaching*) was examined for each Status Interview conducted.

Planned Data Analyses

This study used a repeated measures, within-sample research design to compare participants' reported illegal drug use before and after receiving recovery mentor services. A regression analysis was completed in order to examine the relationship between receiving recovery mentor services and reported drug using behavior. Specifically, recovery mentor services was entered as the predictor variable, and illicit drug-using behavior was entered as the criterion variable.

A regression analysis was conducted to examine the mediating effects of frequency of contact on the relationship between mentoring and reported illegal drug using behavior. Specifically, frequency of contact was entered as the predictor variable, and reported decrease in illicit drug use was entered as the criterion variable.

CHAPTER THREE

RESULTS

Demographic Information

Data used in this study were from a larger drug-treatment program by NJAI. Of the 2,424 individuals enrolled in the NJAI program at the time of data collection, 46 Status Interviews were conducted. Demographic information on these 46 individuals can be seen in Table 1. Of these 46 participants, 69.6% were male, and 30.4% were female. Participants had a mean age of 36.17 ($SD = 7.87$). Regarding ethnic composition, 19.6% considered themselves Hispanic/Latino, 17.4% endorsed Other, and 82.6% were Not Available (*NA*). Most participants were Caucasian (95.7%), while 4.3% were considered Other.

Table 1

Participant Demographics

Demographic	% or M and SD
Male	69.6
Female	30.4
Age	36.17 (7.84)
Ethnic Group	

Hispanic/Latino	19.6
Other	17.4
NA	82.6
Race	
White	95.7
Other	4.3

Drug and Alcohol Usage

In this section, participants were asked about their alcohol and drug consumption within the past 30 days. Table 2 describes the results for the alcohol part of this section. Fifteen of the 46 participants answered this portion of the Status Interview. Of these, 13 participants stated they had not consumed any alcohol. One participant stated he drank alcohol for three days, and one participant drank alcohol for four days. None of the participants reported using alcohol to intoxication during the past 30 days. Regarding illegal drug usage, 13 participants reported no usage. One participant reported using heroin on 15 days, one used heroin on 30 days, and one participant used marijuana on one day. Table 3 describes the results for this part of the section.

Table 2

Alcohol Usage for Past 30 Days

Days	No. Participants
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0	13
3	1
4	1
15	1

Table 3

Illegal Drug Usage for Past 30 Days

Drug	Days	No. Participants
No usage	0	13
Marijuana	1	1
Heroin		
-	30	1
-	15	1

Family and Living Conditions

This section asked participants to answer questions about their current living situations and about children. Fifteen of the 46 participants answered this section of the Status Interview. Table 4 summarizes the results for this section. Regarding living conditions, six participants reported being homeless or living in a shelter, five were living independently, and four reported dependent living. Six participants reported having children, while four were pregnant. Of these six participants, two had their children living

with them, while three participants' children were currently living with someone else. One participant also reported losing parental rights.

Table 4

Family and Living Conditions

Living Conditions	No. Participants
Homeless	6
Dependent Living	4
Independent Living	5
Children	
Yes	6
No	9
Pregnant	4
Children Living Situation	
With Participant	2
With Someone Else	3

Training and Education

This section asked questions about participants' employment status and their highest level of education. Sixteen of the 46 participants answered this section of the Status Interview. Table 5 summarizes results for this section. Regarding job status, 13

participants reported being unemployed but searching for employment. Two participants were employed full time, while one was working part-time. Regarding level of education, 13 participants reported having their high school diploma or GED. One participant reported an eighth grade level of education, one had an 11th grade education, and one had a college or associate degree.

Table 5

Employment and Education

Employment Status	No. Participants
Unemployed	13
Employed Full-Time	2
Employed Part-Time	1
Training	0
Education Level	
Eighth Grade	1
11 th Grade	1
12 th Grade/GED	13
College/Associates	1

Criminal Justice

This section asked participants about their interaction with the criminal justice system for the past 30 days, including arrests, drug-related offenses, and nights in prison. All 16 participants who answered this section reported no involvement with the criminal justice system.

Social Connectedness

This section of the Status Interview asked participants to answer questions about their relationship with social supports during the past 30 days. Table 6 summarizes results for this section. Of the 16 participants who answered, six stated they were attending a non-faith based organization, while four were attending a faith-based organization. Six participants reported not attending any organization. Eight participants also reported having contact with family and friends who were supportive of their recovery. The section also asked to whom participants turned for support. Five participants stated they turned to friends, three turned to family, and eight stated they turned to no one when having trouble or for support.

Table 6

Social Connectedness

Support System	No. Participants

Non-Faith Based Organization	6
Faith-Based Organization	4
None	6
Support Contact	8
Family Members	3
Friends	5
No One	8

Service Domain

This section asked participants and service providers about what community services participants had participated in since their last Status Interview. Examples of services were group or individual counseling, housing, medical care, and mentoring services. All participants received one screening or assessment to enter into the program. Of the 46 available Status Interviews, none of the participants reported receiving any form of services, including mentorship services. Therefore, analyses to explore the correlations between mentoring services and drug-using behavior could not be conducted.

Intervention to Improve Data Collection Rates

Recovery mentors were originally intended to conduct Status Interviews. However, a number of problems interfered with this arrangement. First, there was a shortage of mentors. Many mentors were either not hired or were not actively seeking employment at a recovery mentor service. A second problem was that some hired

mentors lacked the necessary computer skills to complete the Status Interviews. This shortage of mentors, combined with a long referral list of over 4,000 clients, led to an incomplete data set. As part of their theses, two masters level graduate students decided to become involved in the project to increase data collection rates. The researchers were intended to help recovery mentors by talking them through how to conduct electronic Status Interviews by phone. Because of the mentor shortage, the researchers decided to help conduct Status Interviews. Five undergraduates also helped with data collection. Besides conducting Status Interviews, the researchers and undergraduates also phoned mentors in order to recruit them for the project. Mentors were asked questions such as whether they had completed the four addictions domains classes, if they still wanted to work as a mentor, if they were currently employed as a mentor, and if they needed help finding employment.

After gathering information about the mentors, treatment providers were then phoned regarding their interest in hiring mentors. Agencies were asked if they were currently seeking to hire recovery mentors, which gender they were hiring, and whether their decision to hire would change in the future. Callers also asked for a contact name and phone number for the mentors to call. Twenty-four recovery agencies were called. Agencies were divided into six counties. There were five agencies in Essex County, seven in Cumberland County, four in Camden County, two in Burlington County, four in Bergen County, and two in Atlantic County. Of these agencies, 16 were contacted, while voicemail messages were left for eight of the agencies. When asked if they were seeking to hire mentors, 10 agency representatives stated they were not presently hiring mentors,

three stated that they were presently hiring mentors, and 11 gave no clear answer. For example, some contact people reported that they were unsure of whether mentors were being hired, and directed the intern to another contact person who could not be reached. Of the three agencies that were hiring mentors, all of them reported they were hiring both male and female mentors.

In Essex County, one agency stated it was hiring mentors, while four agencies were unable to be contacted for a decision. Of the agencies in Cumberland County, two were not hiring mentors, one was hiring mentors, and four were unable to be contacted. In Camden County, two agencies were not hiring mentors, zero was hiring, and two were unable to be contacted regarding a clear decision. In Bergen County, two agencies stated that they were not hiring mentors, one stated that it was hiring mentors, and one agency was unable to be contacted. Both of the agencies in Burlington and Atlantic Counties reported that they were not hiring mentors.

Agencies were also asked if they had a reason for not currently hiring mentors. Of the 10 agencies that were not hiring mentors, six of them provided a reason for not hiring, while four of them provided no reason. Four agencies stated that the mentor positions were currently full. One agency stated that the mentor program was not yet organized and requested a call back in the recent future. Another agency reported that it was no longer involved with NJAI. The last agency stated that it did not currently involve mentors, but requested more information about the mentorship program. When asked if their decision to hire mentors would likely change, five reported “no/not likely,” three reported, “yes,” and two reported, “maybe.”

Recovery mentors who had expressed interest in employment were then called back to confirm they were still interested in providing mentoring services. They were then given the appropriate contact names and numbers (when available) of nearby agencies. Collected data were then forwarded to the NJAI Project Manager.

Several problems interfered with gathering data for this study. One problem involved contacting participants to complete Status Interviews. Callers phoned the telephone numbers they were each assigned at least once. A total of 16 Status Interviews were completed. Many times, interviews were not completed for participants. For instance, participants stated they were busy and asked to be called back at a later time. There was also difficulty contacting many of the participants. Although 45 of the listed phone numbers seemed to represent the participants' homes or cell phones, most communication consisted of leaving messages. Most messages were left with someone who seemed to live with the client (33), while 6 messages were left with undefined individuals. Of these, three clients were incarcerated, and two were reportedly in detoxification. Eighteen phone numbers were not confirmed to represent the participants' homes. Callers sometimes left messages at unknown numbers asking for the participant to call back at the Hotline number. Although answering machines were reached quite frequently, only 7 messages were left on machines or voicemails. Callers were hesitant to leave messages at unknown numbers due to confidentiality. Twenty-three numbers continued ringing without an answering machine. Some numbers also tended to be outdated. For example, 14 numbers reached individuals who claimed it was a wrong number or who knew the client but stated they no longer lived there and could not be

contacted. In addition, nineteen of the phone numbers were disconnected, and four numbers were repeatedly busy despite numerous attempts.

Besides difficulty reaching participants, there was also some difficulty contacting service providers for information regarding service domains (section G of the Status Interview). Many of the treatment facilities operated during daily office hours, which was an inconvenient time for some callers. Therefore, callers were forced to leave after hour messages at treatment facilities. Three messages were left at drug treatment centers. Many times, callers were unsure of whom to speak to and had to leave vague messages due to confidentiality, which may have contributed to poor responses from service providers.

Another problem in gathering data for this study involved accessing the Status Interviews after they were completed. A considerable time lapse occurred between when interns finished their internship and when data were collected. By the time data were gathered, only 46 of the original 140 interviews were available for examination. Due to problems cited above, 30 were completely unanswered, 16 had at least one section completed, and nine were completed.

CHAPTER FOUR

DISCUSSION

This study was conducted to examine the relationship between NJAI recovery mentoring and participants' reported illicit drug using behavior. However, results indicated that none of the participants in the 46 available Status Interviews reported using mentorship services. Therefore, the hypothesis that mentorship services would lead to decreased illegal drug behavior could not be tested. Similarly, the hypothesis that more frequent contact with recovery mentors would be associated with decreases in drug use also could not be evaluated. Instead, participants' demographic information was examined. Results revealed that most participants were Caucasian males, and the mean of the sample was approximately 36 years old. Most participants reported no alcohol usage in the past 30 days, while three used alcohol for at least one day. A similar pattern existed with drug usage. Whereas 13 participants stated they had not used any illegal drugs, three reported usage. The most reported used drug was heroin. This finding was consistent with results from other studies, which suggest that opiate abusers have a higher rate of relapse (Downey et al., 2003; Silverman et al., 2002). Regarding family and living conditions, many of the participants were homeless or living in shelters. Almost as many were living independently, while a smaller subset was living with someone else. Of the five participants with children, a higher percentage had their children living with someone else. An overwhelming amount of the sample was unemployed, while only three were

employed either full or part-time. Many of the participants appeared to have some form of social support. Ten of the 16 participants reported attending some sort of structured organization to support their abstinence. This may have contributed to the low drug and alcohol usage. Past studies suggest that attending drug-free social activities is associated with decreased drinking (Mallams et al., 1982). Also consistent with past literature about the importance of social support on abstinence (Kidorf et al., 2005; Mallams et al., 1982), three of the eight participants who had no one to turn to for support were those who reported illegal drug usage. None of the participants reported receiving any form of social services, including mentorship services.

Based on previous literature, one can assume that mentoring services would have been beneficial to this population in lowering their drug and alcohol usage. Recovery mentors could have helped participants in a variety of ways. Directly, mentors would have provided social support for participants to encourage sobriety and guard against relapse, similar to AA and NA recovery sponsors. Mentors would act as a genuine and caring individual for participants in times of need. They would also help them cope with the challenges of being sober, such as feeling depressed and isolated. For instance, mentors may instill hope to participants by self-disclosing their own personal successes and failures. Mentors could have also assisted by imparting psychoeducation to participants. For instance, they may have provided information about the nature of addiction, etiology of the disorder, and the recovery process. By having more information, participants might become more aware of consequences of drug use, triggers, and what to expect while in recovery. Research on 12-step sponsorship programs

suggest that having a sponsor is associated with increased abstinence (Caldwell & Cutter, 1998; Huselid, Self, & Gutierrez, 1991). Because many of the functions of NJAI mentors mimic those of sponsors, mentoring could provide similar benefits.

Another function of NJAI recovery mentors was to work with the community and treatment providers to encourage participants' treatment. Mentors would have worked with the ALA and drug counselors to obtain referrals for participants. For instance, mentors could have made referrals to a social club to improve social and coping skills, or to AA or NA meetings.

NJAI mentors could also help lower drug usage in less direct ways by creating a change in environment. One function of NJAI mentors is to help participants gain necessary life skills. For instance, they may encourage individuals to participate in a job club. They may also help participants obtain a job by filling out applications and building interviewing and writing skills. Similarly, recovery mentors could also encourage participants to join activities that promote sobriety, such as a bowling league or spiritual organization. Research has indicated that social environment plays a large role in determining whether a person in recovery relapses (Kidorf et al., 2005). Therefore, participants could have maintained their sobriety by engaging in non-drug related activities because these activities replace drug-related behavior. For instance, a participant may attend church services or a community barbecue instead of interacting with drug-using peers.

As described, NJAI recovery mentors have the potential to lower drug usage by helping individuals develop a more healthy and rewarding lifestyle. Therefore, it is

unfortunate that the study could not be completed. A number of problems contributed to the inability to gather appropriate data for this study. The overarching problem involved lack of organization with the NJAI program. The program appeared to be well conceptualized but poorly implemented. First, there were 4,710 drug-addicted individuals involved in the program. This large number of clients made it extremely difficult for interviewers to track and maintain updated Status Interviews. In addition, the data collection system was not even designed to discern who had already been assigned a recovery mentor and who was still waiting for one. Therefore, interviewers many times had to ask clients whether they needed mentors and track this information manually, which consumed time.

Adding to the problem was that no one person was responsible for conducting Status Interviews and entering the data into the system. Recovery mentors were originally assigned this role. However, another subset of problems was involved with this plan. One problem involved a shortage of recovery mentors. This shortage occurred for a variety of reasons. Some mentors were no longer interested in being hired or were already employed. Several mentoring candidates were confused about or had not completed the necessary requirements to become a recovery mentor. Some mentors that were hired lacked the necessary computer skills to complete the Status Interviews. This shortage of mentors, combined with a long referral list, led to an incomplete data set. The researchers and undergraduate students were willing to conduct Status Interviews, but busy schedules often conflicted with completion.

Besides problems with obtaining mentors, the interviewers also faced difficulties with recovery mentor agencies. Many of the agencies that were phoned were not looking to employ recovery mentors. Another challenge involved contacting appropriate service providers to ask about hiring information. Many of the treatment facilities operated during daily office hours, which was inconvenient for most of the interviewers. Therefore, interviewers often had to leave after hour messages at treatment facilities. Many times, callers were unsure of whom to speak to and had to leave vague messages due to confidentiality. Because the interviewers were volunteers at the treatment site, treatment agencies that did call back had to speak to an employee instead of directly to the interviewers. This barrier sometimes led to confusion from both sources regarding the purpose of the phone calls.

There was also difficulty reaching participants to complete the Status Interviews. Although the interviewers called most numbers more than once, a total of only 16 Status Interviews were completed. Most interviews were only partially completed, since information was needed from both participants and service providers to complete them. There were problems contacting participants directly, and most contact involved leaving messages on answering machines or with other people. Few messages were left on answering machines or voicemails due to confidentiality. Some phone numbers were also outdated or disconnected. These obstacles severely limited the amount of data collected.

There were also limitations to the existing dataset. First, there were problems accessing the Status Interviews after they were completed. A substantial time lapse occurred from when interns finished their internship and when data were collected. By

the time data were gathered, only 46 of the original 140 interviews were available for examination. Due to problems cited above, most were unanswered, a small subset of interviews was partially completed, and a marginal number of them were entirely completed. A second limitation involved the nature of the NJAI program. Most participants reported no drug or alcohol usage in the past 30 days. However, NJAI was not designed to evaluate which portions of the program contributed to these outcomes. For instance, many participants reported that they received both organizational and familial support. This creates a confound in determining which or how much of each service led to the decrease in illicit drug use. A third limitation is that most portions of Status Interviews were based on participants' self-reports. This design allowed for lying or inaccuracies in reporting, possibly reducing validity of results.

Due to the multitude of problems described above, the study's hypotheses were unable to be tested. The fact that the study was unable to be conducted is unfortunate for several reasons. First, many participants in the study were left without recovery mentors. Research has shown that mentoring is associated with increased sobriety (Abbott et al., 1999; Caldwell & Cutter, 1998; Grossman & Tierney, 1998). Mentors may have been especially beneficial for the participants who reported having no one to turn to in time of need. Second, many recovery mentors were left without employment or without information about qualifications to become a recovery mentor. This confusion and lack of progress may lead to frustration and reduced motivation to become a recovery mentor. Third, there are unfortunate consequences for the literature base on recovery mentorship and drug use. Research has shown that opiate-addicted individuals can be difficult to treat

due to frequent drop out and high relapse rate (Downey et al., 2003; Hser et al., 2001; Marsch, 1998). However, studies have also suggested that mentoring can lead to decreased drug and alcohol use (Caldwell & Cutter, 1998; Grossman & Tierney, 1998) and other positive behaviors, such as increased coping skills (Wilding et al., 2003). Unfortunately, no studies were found on the effects of recovery mentoring services on opiate dependence. One can only speculate that mentoring could provide similar benefits to an opiate-dependent population. However, studies need to be conducted to test this hypothesis. A study evaluating the effects of mentoring on opiate use could have been extremely beneficial to the literature base on how to treat opiate-abusing individuals. Due to the potential benefits, future studies should attempt to evaluate the impact of recovery mentor services on opiate-abusing individuals. It may also be useful to perform a randomized study to compare mentorship services with other forms of treatment, such as methadone maintenance and traditional drug counseling. Because frequency of contact has shown to be a mediating factor in the effects of mentoring (Frecknall & Luks, 1992; Kaskutas et al., 1992), researchers should examine whether this holds true for opiate-dependent individuals as well. Finding a link between mentoring and decreased opiate use could help create a more effective way to treat opiate dependence. Likewise, discovering information about mediating factors could help tailor mentorship programs specifically for opiate-dependent individuals. Creating a mentorship program for people who are addicted to opiates could have the potential to increase abstinence and greatly reduce relapse rates, thereby benefiting both addicts and the community.

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