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The Effectiveness of Acupuncture in an Outpatient Drug Treatment Program

by

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Introduction

For decades, a variety of social and world issues have found their way into the daily conversations of Americans. The entire world kept a watchful eye during the time when there was a threat of global nuclear war. The "War on Drugs" campaign, launched by President Nixon also caught the attention of the American public. More recent, however, has been the "War on Drugs" crusade. In the 1990's, it is an everyday occurrence to either turn on the television or open a newspaper and hear of the latest tragedy caused by drugs.

The latest statistics of the drug problem in America are truly astonishing. According to the Uniform Crime Report's data, 7.5 percent of all arrests in 1987 were drug related. Prisons, jails and treatment facilities remain severely overcrowded, while the number of drug arrests and convictions continue to rise (Shapiro, 1989). Due to an alarming number of drug related offenses, law enforcement has been the strategy of choice used to combat the drug problem. Currently, law enforcement is allocated the greatest amount of funds in attacking the drug problem.

The second most common strategy is education and prevention. Examples include the "just say no" approach and other school based educational programs. While education and prevention is a common approach to combating the drug program, it is difficult to measure the impact of this strategy.

The third, and most underutilized strategy used to attack our nations drug problem is treatment. This strategy receives the least amount of funding in our nations fight against drugs. Six million people are in need of drug treatment (Lundine, 1990). However, treatment facilities are limited and currently have space for only 200,000 drug addicts.

Recently, there has been a renewed search for treatment programs to combat the rising epidemic of drug abusers. One of the more controversial efforts has revolved around the use of acupuncture as a remedy for drug addiction. This article will examine the effectiveness of providing acupuncture to drug offenders in an outpatient drug treatment facility.

Acupuncture

Acupuncture can be defined as "the Chinese medical art of inserting fine needles into the skin to relieve pain or disability" (Wensel, 1980:5). Acupuncture was first brought to the United States during the 1800's by Chinese immigrants. Until the 20th century the Chinese practiced their methods among family and friends. An American, Dr. William Osler was the first to recommend the practice of acupuncture within the medical field.

The basis for acupuncture comes from the Chinese belief that there is a constant energy flow within the human body (Wensel, 1980). This energy flow should be in balance with universe. Yin and Yang, which can scientifically be defined as positive and negative electricity, is present within every person. A number of physical, emotional and physiological injuries can at any time effect the balance of energy within the body. "The goal of acupuncture treatment was to restore the balance of Yin and Yang in the afflicted part and the body as a whole" (1980:8).

Acupuncture can be divided into three specialties: traditional acupuncture; symptomatic acupuncture; and acupuncture anesthesia (Binswanger, 1982). Traditional acupuncture is concerned with the entire person. This specialty examines the whole person, not just the area in which they are experiencing pain or discomfort. Only when the person has been fully examined does treatment begin. On the contrary, symptomatic acupuncture treats the area causing discomfort to the patient rather than examining the whole person. Symptomatic acupuncture has been termed "cookbook" acupuncture because it only provides acute care to the patient. Acupuncture anesthesia is used during surgery as an alternative to drugs, to alleviate pain during surgery.

The most noted use of acupuncture in the treatment of drug and alcohol addiction has been performed by Dr. Michael Smith, of the Lincoln Hospital in the Bronx (Smith et al., 1982). Dr. Smith began searching for an alternative to the drugs currently being used in detoxification. He was unresponsive of using an addictive drug to treat an addiction. Smith then began treating addicts by employing the acupuncture techniques used by Dr. Wen of Hong Kong. After a number of experimentations, Smith located more precisely the acupuncture points which would alleviate the clients side effects associated with withdrawal and simultaneously minimize the draining effect on the patient.

For the past nine years, Smith and his colleagues have been detoxifying individuals suffering from an alcohol or drug addiction (Smith et al., 1982). Smith began by treating heroin addicts with 3-4 acupuncture points once a day for 2-5 days. Patients sit from 30-60 minutes in comfortable chairs in a room with other receiving treatment. Most patients find the treatment relaxing and often fall asleep in the chairs. Clients can only be treated for

alcohol addiction when the acute stages of withdrawal are complete, due to the risks of seizures or other medical complications.

There are a number of positive aspects of acupuncture detoxification (Smith et al., 1982 and 1984). Acupuncture is nonaddictive, unlike methadone which merely substitutes a clients current narcotic addiction with another narcotic. Unlike methadone, "needling heals by strengthening overall functioning rather than by a primary narcotic or nerve block effect" (1982:163). Like traditional detox, acupuncture treatment is rapid so waiting lists are often nonexistent. Acupuncture detox is also inexpensive. A large room in the community is all that is necessary when dispensing treatment. The client/therapist relationship is also increased. The acupuncturist does not need to know recent drug usage, rather an overall diagnosis of the client is sufficient. Clients, therefore, do not have to feel guilty or ashamed of their drug problem as they are in other modalities. This is especially beneficial when relapse occurs. "By offering treatment 'on demand' the acupuncture detoxification protocol minimizes barriers to the formal client to reenter treatment" (1984:253). Clients are not made to feel shame for "failing" as they are in other treatment facilities.

Acupuncture also focuses mainly upon the client's physical addiction to drugs or alcohol (Smith et al., 1984). "Acupuncture can prevent the sensations of drug cravings even if none of the personal problems are resolved (Smith et al., 1982:162). Although the hospital does provide some counseling, Smith contends that the underlying social and psychosocial problems can be confronted with after the addiction has been broken.

Smith et al. (1982) report that clients have various responsibilities during their treatment with acupuncture. Clients should come in for their treatment as "drug free" as possible. Two successive days of treatment is usually necessary before late night cravings are eliminated so a clients can come completely drug-free to treatment. Clients must attend daily until their acute symptoms have disappeared (Smith et al., 1984). Patients of acupuncture must be aware bodily changes will occur during treatment. Sweating, loose stools, moods swings as well as tingling and soreness at the needle sites are among common symptoms during acupuncture treatment. Clients also need to relax in order for treatment to be effective. Those who fail, often had difficulty in relaxing. Finally, clients should understand that after their body becomes healthier and stronger they can deal with the various psycho-social issues presently affecting their life.

Acupuncture detoxification is a new treatment option being used with drug and alcohol offenders. Empirical research, therefore, is quite limited. Three current articles concerning the effectiveness of treating drug and alcohol addicts with acupuncture will be discussed. In the first, Dr. James Olms (1984), used acupuncture with 34 patients with the goal of each becoming abstinent from alcohol. He reported that six were severe alcoholics

and the remaining "were reliable working people who felt that alcohol was an obstruction to their future and wanted to eliminate it" (1984:147). Olms notes that one severe alcoholic reported no positive result from treatment, six returned for additional acupuncture approximately five months later and the remaining "have done very well" (p. 147). The author reports that he received no complaints of withdrawal symptoms such as sweating, shaking or insomnia. Ohms' study did not include a comparison group and was essentially a doctor's experience in treating some alcohol patients.

In the second study, Smith et al (1984) reported that ninety percent of the clients treated with acupuncture at Lincoln hospital are relieved of withdrawal symptoms. Additionally, ninety percent return for treatment without external pressures such as receiving methadone or as a condition of probation. The authors estimate that 60 percent will remain drug free for several months after completing 2-3 weeks of treatment, however, no statistics are given in support of any of these claims.

Finally, in a third study Bullock et al (1987) set up a control and experimental group to test the effectiveness of acupuncture in alcohol recidivism. Criteria for admission to the treatment was as follows: must be a male 25-65; twenty or more prior admissions to detox or five in the current year; failure in prior treatment (includes refusal to treatment); unemployed longer than six months; and limited support from family or friends. The clients were housed so attrition rates would be reduced. No counseling or support groups were made available to the clients.

Initially, 54 clients participated; 27 in both the control and experimental group. The experimental group received the acupuncture in the correct ear points which affiliated with the alleviation of withdrawal symptoms. The control group received acupuncture in the ear area, but not in the specific points designated to assist a client in their addiction. The groups were similar in age, race, marital status, number of years abused alcohol and length of unemployment.

This single blind experiment consisted of three treatment phases. During the first phase the client received five days of acupuncture. In phase II the clients received three acupuncture sessions/week for a month and in phase III, received 2 acupuncture sessions/week for 45 days.

The study reported significant differences on need for alcohol, drinking episodes and personal feeling by the clients on whether acupuncture had an impact on their desire to drink. The major concern with this study was the number of clients on which some statistics were based. The groups only had 27 clients to start, but only 10 clients from the treatment group and 2 from the control group actually finished phase III. Thus, the reliability of the results are extremely limited. Without a larger sample and standardize measures of drinking episodes (e.g., urine testing rather than simple observation), this study provides little empirical data concerning the effectiveness of acupuncture.

The use of acupuncture to treat substance abusers is not unknown, or without its supporters. However, most of the studies have focused on its use with alcoholics, and to-date there has been very little empirical evidence that it is an effective treatment for substance abuse.

The Program

The subject of this study is an out-patient drug-free treatment facility for chemically dependent offenders operating in a mid-sized midwestern city. The program was created after some court officials attended a conference and became aware of new innovative programs other courts were implementing. The idea to use acupuncture transpired from an awareness of Michael Smith's success with acupuncture with walk-in drug addicts for detoxification at Lincoln Hospital in the Bronx. The program began in September, 1990. During the time frame of this study the program was an independent treatment facility under the supervision of the court.

The program strives to attain four main goals: to provide the court with additional sentencing alternatives; provide additional treatment resources for probation officers; provide quality care for adult probation clients at no cost to the client; and to have the offender lead a chemical-free, productive and pro-social lifestyle. The program embraces a treatment philosophy that would prefer to rehabilitate an offender rather than incarcerate them. The treatment specialists believe that drugs are merely a symptom of a problem. The treatment administered to the clients by the counselors focuses primarily on education and group therapy.

The program is designed to treat drug offenders through a combination of traditional group counseling and therapy accompanied by acupuncture. Offenders are referred directly from Court, or through the recommendation of a probation officer. The majority of the program's clients are acquired from probation officer referrals. In addition, all probationers are drug tested when they are admitted to probation. Those that exhibit a drug problem are tested throughout their term of probation.

The program itself is divided into three phases. Each phase is designed to be completed in 30 days. However, clients that fail to complete program requirements in that time remain in each phase until they successfully meet their objectives. During the first phase, offenders are required to attend treatment sessions five days a week. The second phase is a three day per week component, while the final phase consists of 30 days of aftercare. Following completion of the program, offenders are released to probation. Clients in all phases are required to attend Alcoholics Anonymous, Narcotics Anonymous or Cocaine Anonymous four times per week, which enables clients to hear the successes and failures of others in the community. Three weeks of consecutive negative urines are required to move to the next phase,

even if the client is doing well in the program. Those clients who do not participate in treatment, fail to appear, have consecutive dirty urines or are convicted of new offenses are usually terminated from the program. Although clients normally spend anywhere from 120-160 days in the program a minimum of 90 days is required to graduate.

The acupuncture treatment is provided by a physician. Acupuncture is given five days per week during the first phase. Treatment can continue into the second phase if there is a relapse or if the offender requests it. Acupuncture is given in the five points of the outer year, and each session is forty-five minutes long.

The staff at the program include a director, a supervisor, and four counselors responsible for client treatment. In addition, a physician is under contract to administer acupuncture. The counselors are either in the process or have been verified as a Certified Chemical Dependency Counselors (CCDC). In addition, each client is under the supervision of a probation officer specially trained to work with substance abusers.

Methods

The research design is a double-blind baseline study.¹ The program participants were divided into three groups; an experimental group, which received acupuncture on a regular basis, a control group, which did not receive acupuncture, and a placebo group, which received an acupuncture-like simulation. It should be noted that initially all cases referred to the program were given the acupuncture treatment. Once the acupuncture study began, offenders were randomly placed into one of the three groups listed above. Neither staff or clients were aware of group placement.² All of the offenders treated by the program from its inception through the middle of May, 1992 are included in this study. A total of 274 cases are included in this evaluation, of these 182 were in the acupuncture group, 45 were in the control group and 43 were in the Placebo group.

Data related to offender background characteristics included demographics, criminal records and substance abuse history. Outcome indicators included arrests, convictions, technical violations, program completion and offender status. Information was gathered from the official files of the Court. Data analysis included comparisons between the three groups. Chi square and analysis of variance was used for significance testing.

There are a number of limitations to this study that should be noted. First, the sample size of the Control and Placebo groups is relatively small. However, it should be noted that even when these two groups were combined the results did not change substantially.

Second, the nature of an out-patient treatment program is such that it is very difficult to evaluate the effectiveness of the treatment. In other words,

it is unfair to attribute failure to treatment, when in fact the vast majority of offenders did not receive the treatment (complete the program). For this reason it is difficult to attribute offender's success or failure to treatment. In addition, the fact that all groups received some form of substance abuse intervention makes it difficult to isolate the effects of the acupuncture treatment.

Results

Background Characteristics

The data in Table 1 examines selected background characteristics of the three groups. These data indicate that the groups were similar on all the factors. Overall, the majority of each group was male, black, had less than a high school education, were single, unemployed at entry and recommended for probation. The average age ranged from 28 for the Control group to 29 for the Placebo group. The risk and needs classification data indicated that the Control and Placebo groups reported slightly higher scores, however the differences were not significant.

Table 1
Background Characteristics

Item	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Sex:						
TB	2.30"	2.90"	4.00"	4.60"	5.30"	5.90"
Male	136	74%	37	84%	34	79%
Female	48	26%	7	16%	9	21%
Race:						
Black	141	77%	28	64%	31	72%
White	43	23%	16	36%	12	28%
Age:						
18-21	32	17%	12	27%	10	23%
22-28	58	32%	13	29%	10	23%
29-35	60	33%	10	23%	14	33%
36+	34	18%	9	21%	9	21%

(Average Age: Acupuncture = 28.9; Control = 28; Placebo = 29.1)

Variable	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Education:						
Less than H.S.	110	60%	34	77%	32	74%
H.S. Grad	61	33%	8	18%	7	16%
Post H.S.	12	7%	2	5%	4	9%
(Average Education: Acupuncture = 10.7; Control = 10.4; Placebo = 10.6)						
Marital Status:						
Single	119	65%	33	75%	26	62%
Married	64	35%	11	25%	16	38%
Employed at Program Entry:						
Yes	46	25%	13	30%	8	19%
No	138	74%	31	70%	35	81%
PSI Recommendation:						
Probation	139	77%	39	89%	29	69%
Incarceration	26	14%	4	9%	11	26%
No Recommendation	16	9%	1%	2%	2	5%
Risk Classification:						
High	80	47%	20	61%	20	59%
Medium	47	28%	11	33%	9	26%
Low	43	25%	2	6%	5	15%
(Average Score: Acupuncture = 14.6; Control = 15.0; Placebo = 15.7)						
Needs Classification:						
High	57	34%	13	39%	14	41%
Medium	74	44%	15	45%	14	41%
Low	38	22%	5	15%	6	18%
(Average Score: Acupuncture = 18.8; Control = 17.1; Placebo = 18.8)						

Criminal History

Table 2 compares the Criminal Histories of the three groups. These data revealed that the Placebo group reported the most pronounced criminal history on all five of the measures. In addition, the offense level of the current charge indicated that over 70 percent of each group committed a felony 3 or 4 offense.³ None of the differences were significant.

Table 2
Criminal History and Offense Data

Variable	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Juvenile Record:	70	40%	15	35%	18	45%
Prior Sentence to Probation:	71	39%	16	37%	17	41%
Prior Felony Convictions:	69	38%	18	41%	22	51%
Prior State Commitment:	36	20%	8	19%	13	31%
Previous conviction for same offense:	27	15%	5	12%	7	17%
Offense Level:						
Felony 1	10	5%	1	2%	1	2%
Felony 2	13	7%	9	21%	7	16%
Felony 3	60	33%	9	21%	13	30%
Felony 4	93	55%	25	57%	22	51%

Substance Abuse and Psychiatric Assessment

Table 3 illustrates the assessment information of the three groups at program entry. These variables deal primarily with substance abuse and psychiatric history. Overall, these factors reveal that the drug of choice for all three groups was cocaine. Over 70 percent of the Acupuncture group, and 57 and 63 percent of the Control and Placebo groups respectively, preferred cocaine. The average length of drug abuse was approximately twelve years for each group. While a higher percentage of the Control and Placebo groups reported prior drug treatment and successful completion of treatment, the differences were not significant.

Overall, these data indicate that the three groups were similar on basic background characteristics, criminal history and chemical abuse and psychiatric history. Furthermore, the assessment data indicates that all three groups had a considerable history of substance abuse. Each group had a long involvement with drugs and alcohol, and a considerable percentage had been through prior treatment programs. Overall, the three groups can be classified as part of a drug abuse sub-culture.

They do not have extensive criminal histories, and the vast majority were convicted of either a felony 3 or 4. These data support comparisons between the three groups with regard to outcome.

Table 3
Assessment Information

Variable	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Drug of Choice:						
Alcohol	8	4%	6	14%	5	12%
Cocaine	130	71%	25	57%	27	63%
Heroin & Opiates	14	8%	3	7%	4	9%
Marijuana	20	11%	7	16%	4	9%
Other	12	6%	3	7%	3	7%

Variable	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Results of Initial Drug test:						
Positive	104	62%	25	64%	23	58%
Negative	63	38%	14	36%	17	42%
Length of Drug Abuse:						
Less than 3 yrs.	21	13%	4	10%	5	14%
3 to 6 yrs.	25	16%	10	25%	4	11%
Over 6 yrs.	116	72%	26	65%	26	74%
(Average: Acupuncture & Control = 11.6 yrs; Placebo = 12.2 yrs.)						
Prior Drug Treatment:	63	40%	21	51%	16	43%
Successfully Completed Prior Drug Treatment:	27	20%	13	38%	10	32%
Psychiatric History:	23	16%	5	14%	3	9%
Prior Suicide Attempts:	21	11%	4	9%	5	12%

Outcome Performance

Table 4 examines the data related to the completion of the program. These data indicate that 24 percent of the Acupuncture group successfully completed the program, compared to 27 percent of the Control group and 19 percent of the Placebo group. When the Control and Placebo groups are combined, approximately 23 percent completed the program.

Table 4
Program Completion

Item	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Completed Program:	44	24%	12	27%	8	19%

Table 5 presents data with regard to arrests, convictions and technical violations over the evaluation period. These data are broken down by misdemeanors and felonies. Total arrests and convictions combines these two categories. The Acupuncture group reported a lower percentage arrested and convicted for misdemeanors, and a higher percentage arrested and convicted for felonies. When combined, 20 percent of the Acupuncture group was arrested and 15 percent were convicted of a new offense, versus 18 and 23 percent arrested and 16 and 12 percent convicted for the Control and Placebo groups respectively. The majority of each group reported a technical violation, ranging from 61 percent for the Control group to 72 percent for the Placebo data. None of these differences were significant.

Table 5
New Arrest/Conviction/Technical Violation

Item	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Misdemeanor Arrest:	13	7%	6	14%	7	16%
Misdemeanor Conviction:	9	5%	5	11%	2	5%
Felony Arrest:	24	13%	3	7%	4	9%
Felony Conviction:	18	10%	3	7%	3	7%
Total Arrested:	37	20%	8	18%	10	23%
Total Convicted:	27	15%	7	16%	5	12%
Technical Violation:	128	70%	27	61%	31	72%

Finally, the current status of the three groups is examined in Table 6. These data divide outcome into three categories; Success (which includes "still under supervision" and "released from supervision"), Failure (which included all offenders incarcerated, whether through a technical violation or a new offense) and Absconded.⁴

Table 6
Probation Outcome

Item	Acupuncture		Control		Placebo	
	N	%	N	%	N	%
Success:	58	33%	19	44%	16	38%
Failure:	89	50%	14	33%	16	38%
Absconded:	31	17%	10	23%	10	24%

Successes included those offenders that completed probation or were still under supervision. Failures included those offenders that were revoked or incarcerated on a new offense. Several cases were classified as "other" and were not included in this table. "Other" included those offenders who died or transferred out of the jurisdiction.

These data indicate that overall fifty percent of the Acupuncture group failed, compared to 33 percent for the Control group and 38 percent of the Placebo group. When the Absconder group is added to the failure category, the results re: 83 percent Acupuncture; 77 percent Control, and 76 percent Placebo. Again, none of these differences resulted in significant results.

Conclusions

Based on the above analyses, the following conclusions can be reached: First, the three groups were very similar with regard to demographic, criminal history and assessment factors. Additionally, the assessment information reveals that the groups had a significant history of substance abuse. The similarities between the two groups allow for valid comparisons to be made with regard to outcome. These data indicated that the program

participants appear to be part of a drug abuse sub-culture. They have a long and complex drug abuse history. These groups do not display a long history of serious criminal behavior (except for drug abuse). Over 75 percent of each group was convicted of a felony 3 or 4, and the majority of these offenses were property or drug related.⁵

With regard to outcome there is no evidence that acupuncture had any appreciable effect on program completion, arrests, convictions, or probation outcome. Again, it should be noted that it is difficult to evaluate the effectiveness of treatment if the offender is not present to receive it. However, given that the three acupuncture groups were randomly assigned and given the same opportunities to complete the program, we would still expect a treatment effect. There was none. Without a more controlled environment, it will be nearly impossible to attribute any positive results to the acupuncture treatment. The best that can be said is that the acupuncture group performed no worse (statistically) than the Control or Placebo groups.

Footnotes

1. This study is part of a larger research effort that examined the effectiveness of all aspects of the program.
2. For the purposes of the acupuncture experiment, offenders in the Placebo group were given acupuncture in similar areas as the experimental group. Neither the clients or the staff (with the exception of the administering physician) were aware of who was receiving the true acupuncture treatment. The Control group was not involved in acupuncture treatment and their identity was known.
3. A felony 1 is the most serious offense and a felony 4 the least.
4. Absconders are usually considered part of a failure group, however, they were considered separately in this analysis since outpatient programs tend to have a higher absconcion rate than residential programs. Even when this group was combined with the failure group the results are the same. Several offenders were listed as "other", which included transfers and deaths, and not included in this analysis.
5. The actual convicted offense was not included in this article, however, there were no significant differences between the groups on the type of offense committed.

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