

# Implementation of the National Acupuncture Detoxification Association Protocol in a Community Mental Health Setting

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## Abstract

**Objectives:** The purpose of this study was to evaluate patients' satisfaction with National Acupuncture Detoxification Association (NADA) acupuncture services in two community mental health settings.

**Design:** Cross-sectional, mixed-methods study. Participants who had participated in acupuncture services were given a survey that contained both quantitative and qualitative items.

**Settings:** Participants were recruited from two community mental health centers in the New England area.

**Participants:** Fifty patients enrolled in community mental health centers. They were eligible to participate in the study if they had attended at least one acupuncture session. Twenty-five percent of the sample comprised monolingual Spanish-speakers.

**Interventions:** Participants had received at least one session of auricular acupuncture according to the NADA protocol.

**Outcome measures:** Participants completed a satisfaction survey that contained 10 items in English or Spanish.

**Results:** On a 5-point Likert scale, participants reported that they found acupuncture beneficial (mean, 4.35; standard deviation, 0.78). Data from the qualitative items were analyzed and revealed two prominent themes: (1) relaxation and (2) improved focus and concentration. Eight percent of the sample reported no benefit of acupuncture during the session.

**Conclusion:** Overall, the patients reported high satisfaction with the acupuncture services received, as well as a variety of benefits (relaxation, improved focus and concentration, improvement in psychiatric symptoms or substance use craving, and somatic benefits).

## Introduction

COMMUNITY MENTAL HEALTH SYSTEMS provide services for the most vulnerable populations. Patients seeking care from these systems have chronic and debilitating psychiatric and substance use disorders, which negatively affect treatment engagement and medication adherence. Furthermore, severe mental illness and addiction increase the risk for early mortality and disability among this population due to suicide, underdiagnosis, and lack of treatment of chronic medical conditions.<sup>1</sup> Given the estimates of shortened life expectancy and burden of disease for this population, the central challenge for community behavioral health systems is to provide a full range of services while chronically operating with insufficient resources. In addition, the enactment of the Affordable Care Act 2010 has provided further impetus for systems change.

There is a call for the incorporation of innovative clinical programming in community health systems to reduce patient

suffering. The low cost and high feasibility associated with complementary therapies, specifically auricular acupuncture, make them ideal for implementation within financially strapped public mental health systems. Acupuncture is a low-cost, simple intervention used in 500 state-run addictions treatment programs in the United States and more than 1500 addictions programs worldwide.<sup>2,3</sup>

The National Acupuncture Detoxification Association (NADA) protocol, designed to treat substance addiction and co-occurring mental health disorders, is a one- to five-point auricular needling protocol. The protocol, not as a stand-alone treatment but rather as part of an integrated treatment program, is associated with increases in treatment engagement and retention,<sup>4</sup> decreases in craving and withdrawal, and improvement of dysphoric states, such as depression, anxiety, and anger.<sup>5</sup> Despite increasing utilization and a high degree of acceptance<sup>6</sup> of the NADA protocol within addiction and psychosomatic health clinics, little is known about

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patient satisfaction and reported benefits of such services in community mental healthcare settings.<sup>7,8</sup> The purpose of this study was to systematically measure patients' experiences of auricular acupuncture as an adjunct to their current treatment plan within two community mental health clinics.

### Materials and Methods

Participants were adults recruited from two community mental health centers in the New England area. Patients were eligible for the study if they were enrolled patients and had attended at least one auricular acupuncture session. The acupuncture treatment provided was the NADA five-point protocol. The predetermined auricular points addressed in the protocol are the sympathetic, *Shen Men*, kidney, liver, and lung points. The acupuncture protocol was administered by behavioral health staff members, which included psychiatric nurses, clinicians, drug counselors, and psychologists, all trained and certified in the NADA protocol.

Participants completed a survey that was created by the investigators. It contained 10 items (5 quantitative and 5 qualitative items) that assessed the number of acupuncture sessions attended, how enjoyable patients found the services, how beneficial the services were, and the likelihood of attending a future acupuncture session. Participants were also asked to report the benefits they perceived during the acupuncture session, benefits they perceived after the session, how it has affected their relationship with treatment providers, how it has affected their ability to achieve treatment goals, and any concerns they had regarding the treatment. The Human Research Protection Program at Yale University approved this study.

The quantitative data were analyzed by examining descriptive characteristics and correlations between variables. Independent-sample *t*-tests were used to compare participants who had attended one to three sessions of acupuncture with those who had attended four or more sessions. Because the surveys were anonymous, variables within the medical record (e.g., number of nonacupuncture treatment sessions, time since treatment enrollment) were not assessed. The two groups were compared on the following variables: how much they enjoyed acupuncture, how beneficial they found it to be, and how likely they were to attend another acupuncture session. The qualitative data were assessed by analyzing item content and coding the content into themes. A constant comparative method was used to break each response into a discrete unit; they were then organized into themes and subthemes.<sup>9</sup> Analysis performed using SPSS Version 19 software.

### Results

Fifty surveys were completed. Monolingual Spanish speakers completed 13 of the surveys (26% of the total sample). Descriptive characteristics for the quantitative

items are presented in Table 1. Overall, participants indicated that they enjoyed the acupuncture treatment, they found it beneficial, and that they were likely to attend another session in the future. Fifty percent of the total sample also stated that acupuncture had helped to improve sleep quality. The quantitative items were significantly correlated: Enjoying the session and finding acupuncture beneficial ( $r=0.56$ ;  $p<0.001$ ), enjoying the session and the likelihood of attending future sessions ( $r=0.44$ ;  $p=0.002$ ), and finding acupuncture beneficial and the likelihood of attending future sessions ( $r=0.55$ ;  $p<0.001$ ).

Independent-sample *t*-tests were conducted to examine mean differences between patients who were relatively new to receiving the acupuncture service (one to three sessions) and those that had attended four or more sessions. There was a significant difference between those who had attended one to three sessions ( $n=26$ ) (mean, 4.46; standard deviation [SD], 0.65) and those who had attended four or more sessions ( $n=24$ ) (mean, 4.87; SD, 0.34) ( $t$  [38.32] = -2.86;  $p=0.007$ ). There was also a significant difference for finding acupuncture beneficial between participants who had attended one to three sessions (mean, 4; SD, 0.82) and those who had attended four or more sessions (mean, 4.71; SD, 0.55) ( $t$  [47] = -3.55;  $p=0.001$ ).

Finally, the two groups were compared on how likely they were to attend a future acupuncture session. Results indicated a significant differences between participants who had attended one to three sessions (mean, 6.04; SD, 1.61) and those who had attended four or more sessions (mean, 6.78; SD, 0.74) ( $t$  [35.9] = -2.2;  $p=0.041$ ).

In summary, participants who had attended four or more sessions of acupuncture were more likely to have enjoyed their last acupuncture session, found acupuncture beneficial, and reported a higher likelihood of attending a future session. There were no differences between treatment sites and the survey items. There were also no differences between monolingual Spanish-speakers ( $n=13$ ) and the rest of the sample ( $n=37$ ). However, the analyses were underpowered, and no conclusions can be drawn from the limited sample size.

Results of the qualitative analyses revealed several prominent themes. When participants were asked about the benefits of acupuncture that they noticed during the session, the following themes emerged: relaxation, improved focus and concentration, improvement in psychiatric symptoms or substance use craving, somatic benefits, and none (8% of the sample). The relaxation theme was broken down into the following subthemes: feeling calm, feeling balanced, meditation opportunity, and sense of well-being. Examples of the somatic benefit were "I felt lighter, and my heart slowed down a lot which made me feel better" and "I forgot about my pain."

When participants were asked about the benefits of acupuncture that they noticed *after* the session (immediately

TABLE 1. DESCRIPTIVE STATISTICS FOR ACUPUNCTURE SURVEY ITEMS ( $N=50$ )

Variable	Minimum	Maximum	Mean	Standard deviation
Enjoyed acupuncture <sup>a</sup>	3.00	5.00	4.66	0.58
Found acupuncture beneficial <sup>a</sup>	3.00	5.00	4.35	0.78
Likelihood of attending acupuncture again <sup>b</sup>	2.00	7.00	6.39	1.32

<sup>a</sup>Item rated on a 5-point Likert scale.

<sup>b</sup>Item rated on a 7-point Likert scale.

after or during the same week), the following themes emerged: relaxation, positive cognitions, improvement in psychiatric symptoms or substance use craving, improved focus and concentration, physical well-being, and none (22% of the sample). When asked if they had concerns about the treatment offered, 84% of the sample stated that they had no concerns. Of those who had concerns (8% of the sample), themes were feeling nervous (4%), feeling temporary discomfort (2%), and wanting more acupuncture services (2%).

When asked how the acupuncture treatment affected how participants felt about the clinic staff, the following themes emerged: felt more positive, appreciation for holistic care, liked acupuncture, increased treatment engagement, helped to meet treatment goals, and none (12%).

Finally, participants were asked how acupuncture helped them to reach their treatment goals. The following themes were present: relaxation, increased focus and attention, improvement in psychiatric symptoms or substance use craving, increased treatment engagement, "yes," and none (22%).

### Discussion

Acupuncture services are increasingly being integrated into behavioral healthcare settings,<sup>2,3,6</sup> and yet relatively little is known about patient satisfaction of such services in community mental health clinics. To address this gap in the literature, anonymous patient satisfaction surveys were administered to 50 community mental health patients who had attended at least one session of acupuncture. Results showed high patient satisfactions for acupuncture services: Patients reported overall that they found the acupuncture treatment enjoyable and beneficial, that they felt more positive toward staff, and that they were likely to attend future sessions.

There was also a qualitative portion to the survey in which patients were asked about the benefits they noticed during the session, after the session, what concerns they had, how the incorporation of acupuncture affected how they felt about clinic staff, and how acupuncture helped them to meet their treatment goals. The top three themes that patients reported during the session were that they felt relaxed, noticed improved focus and concentration, and noticed improvement in psychiatric symptoms or substance use craving. After receiving the session, they reported relaxation, positive cognitions, and improvement in psychiatric symptoms or substance use craving.

This study had several limitations. The first is that because the surveys were collected anonymously, identifying information was not collected. This precluded analyses examining demographic factors, treatment history, and illness severity. It also precluded the ability to examine outcomes over time. Another limitation was that the survey was administered only to patients who had received acupuncture services; thus, the views about acupuncture within the general clinic setting could not be assessed. Despite these limitations, there is clinical benefit in understanding patient satisfaction and perceived benefits of auricular acupuncture.

### Conclusion

This study provides preliminary support for the inclusion of auricular acupuncture services into community mental

health centers. Patients reported relatively high levels of satisfaction with the services, in addition to a variety of benefits that included improved cognitions and mood. Future research should evaluate patient satisfaction over time, as well as how it is related to specific treatment outcomes.

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### Author Disclosure Statement

No competing financial interests exist.

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