Examining The Benefits of Acupuncture for Medically Underserved Populations

Hasan Yasin, MD; Cutler Cannon, MSc; Andrew Janicki, MD, Wei-Chen Lee, PhD
The University of Texas Medical Branch (UTMB), Galveston, Texas
Contact: hayasin@utmb.edu

Introduction / Background

1. Acupuncture is an evidence-based, holistic modality that addresses multiple patient symptoms and medication side effects. Such a holistic approach overlaps with the principles of family medicine.
2. Health insurance plans such as Medicare Part B only cover acupuncture for chronic low back pain with sciatica and there is a little research on its use for medically underserved populations with distinct health needs and experiencing delays in healthcare due to high costs.[1]
3. The study objective is to examine the benefits of acupuncture on patient outcomes. The secondary data analysis was considered nonregulatory research by IRB.

Methods

1. This is a non-randomized observational study to evaluate delivery logistics, patient recruitment, and health outcomes.
2. All patients aged 18+ are qualified for this study. The clinic opens at 1-5pm on Tuesdays at a St. Vincent Hope Clinic, an integrated care clinic that also offers food pantry, mental and dental care, and transportation to low income, uninsured individuals.
3. Pre- and post surveys including pain scale (0-10) and fatigue scale (0-10) are logged to compare benefits of acupuncture. We also ask patients about their perceptions of quality and effectiveness of care.
4. Mixed regression models (unstructured covariance, id and visit as random effects) were used to examine the relationship between treatment and patient outcomes while adjusting for patient demographics, clinical characteristics, and number of visits. All analyses are done by Stata v18 and p-value is set 0.05.

Results

1. From October 2025 to June 2026, we received 48 new patients in total. More than half of patients were female, and the average age was 53.3 years old. On average, they had 2.5 conditions and were taking 4.6 medications. Also, these 48 patients made 2.7 visits on average.
2. The heart rate, pain level, and fatigue level were significantly decreased ($p<0.05$) after the acupuncture care (Figures 1-3).
3. With or without controlling for covariates, acupuncture is associated with a significant reduction in heart rate, pain and fatigue levels (Table 2).

Table 1. Individual Characteristics	**n(%) or mean(se.)**	**range**
Female	27 (56.3%)	
Age	53.3 (1.93)	32-90
Married	15 (31.3%)	
Full-time job	15 (31.3%)	
Uninsured	41 (85.4%)	
Smoking	9 (18.8%)	
No. of medications	**4.6 (0.45)**	**0-12**
No. of conditions	**2.5 (0.19)**	**0-5**
Mental health history	14 (29.2%)	
Musculoskeletal/pain history	21 (43.8%)	
Cardiovascular conditions	33 (68.8%)	
Hispanic	28 (58.3%)	
Non-H White	12 (25.0%)	
Non-H Black	6 (12.5%)	
Non-H Others	2 (4.2%)	
Disability	6(12.5%)	
No. of visits	**2.7 (0.48)**	**1-15**

Figure 1. Heart Rate (bpm)

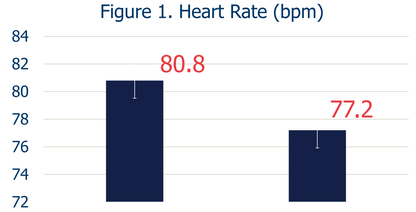


Figure 2. Pain Scale (0, no pain -10, extremely painful)

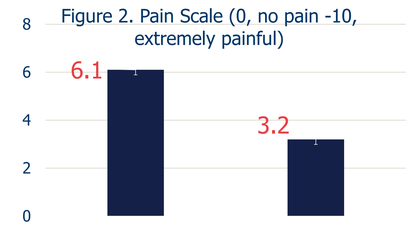


Figure 3. Fatigue Scale (0, no fatigue - 10, extreme fatigue)

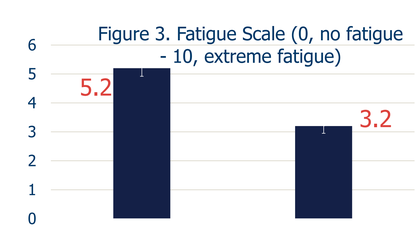


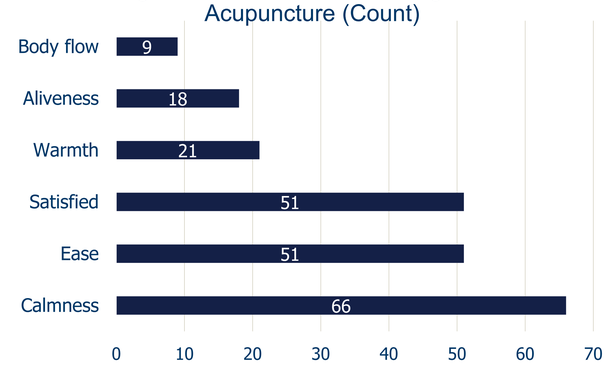


Table 2. Compare Pre-and Post-Outcomes	**Heart**		**Pain**		**Fatigue**	
	Coeff.	**p-value**	**Coeff.**	**p-value**	**Coeff.**	**p-value**
Simple Regression						
Post-visit	-3.64 (1.81)	0.045	-2.90 (0.30)	<0.001	-1.98 (0.38)	<0.001
Mixed Model with Controls: # of visits, age, gender, # of medications, and # of chronic conditions						
Post-visit	-3.51 (1.11)	0.002	-2.88 (0.24)	<0.001	-1.98 (0.26)	<0.001
No. of visit	0.08 (0.22)	0.719	0.03 (0.05)	0.530	-0.09 (0.05)	0.082

Results

4. Of 128 encounters (new and follow up visits), patients used “calmness” to describe their feeling 66 times. Also, 100% of patients said they will recommend acupuncture to their family and friends (Figure 4).

Figure 4. Self-Reported Feelings after Acupuncture (Count)



Conclusion

1. Consistent with the literature, acupuncture could help reduce pain and fatigue or exhaustion due to other illnesses.[2,3]
2. Although our sample size was small, our patients reported that acupuncture helped them feel calm and reduced their pain and fatigue.

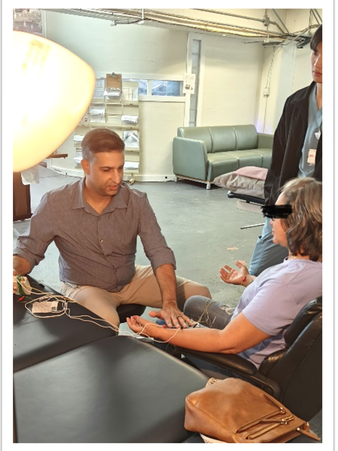


Figure 5. Dr. Yasin’s Electro-Acupuncture Service & QR Code for the Video

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References

1 Medicare.gov. (2026). Acupuncture. Available at: https://www.medicare.gov/coverage/acupuncture

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