

PRANA-BASED INTERVENTION IS ASSOCIATED WITH INCREASED ELECTRICAL CONDUCTIVITY OF DISTILLED WATER: AN EXPLORATORY STUDY WITHIN INDIAN KNOWLEDGE SYSTEMS

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ABSTRACT

In traditional Indian knowledge systems, Prana is described as a vital life force believed to regulate living systems and influence natural elements. Classical Indian philosophical and healing traditions, including the Veda, Upanishad, Yoga and Ayurveda, describe subtle interactions between consciousness, energy, and matter. However, experimental validation of such concepts using modern analytical methods remains limited. The present pilot study investigated the influence of Pranic Healing, a non-contact energy-based practice derived from the concept of Prana, on selected physicochemical properties of distilled water under controlled laboratory conditions. A three-arm, assessor-blinded, randomised pilot experimental design was employed. Three experienced male Pranic Healing practitioners conducted the healing. Distilled water samples were allocated to intervention and control groups. Electrical conductivity (EC), pH, and oxidation–reduction potential (ORP) were measured before and after the intervention using calibrated analytical instruments. Practitioner psychophysiological characteristics were documented using the Flow State Scale (FSS), Triguna, and Tridosha assessments. Results showed reproducible increases in electrical conductivity across all samples, with comparatively greater changes observed in healer-treated samples, particularly on the second experimental day, where the maximum increase reached 69.62%. pH remained within near-neutral limits with minor fluctuations, while ORP showed inconsistent variability. Practitioners demonstrated high flow state scores (4.42–4.69/5) and predominance of Sattva characteristics. These preliminary findings suggest measurable physicochemical variations in water under Prana-based intervention conditions, with electrical conductivity showing the changes. The study provides an exploratory framework for scientifically evaluating Indian Knowledge Systems using contemporary analytical methods and supports future interdisciplinary research on complementary health practices. The study aligns with United Nations Sustainable Development Goal(SDG)-3: Good Health and Well-being by advancing evidence-based complementary health research.

Keywords: Electrical Conductivity, pH, Prana, Water.

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INTRODUCTION

Indian knowledge systems encompass diverse scientific, philosophical, and ecological traditions developed through centuries of observation and interaction with nature. Foundational texts of Yoga, Ayurveda, and Vedantic traditions describe *Prana* as a universal life force governing biological activity. In Ayurvedic literature, the five great elements (*Panchamahabhutas*)—earth, water, fire, air, and ether—form the basis of material existence, with water (*Jala*) regarded as a dynamic medium capable of subtle energetic interactions. Traditional Indian healing systems propose that intentional modulation of *Prana* may influence physiological, psychological, and environmental systems. Pranic Healing is a contemporary non-contact therapeutic system derived from these traditional concepts, wherein practitioners direct focused intention and energy toward biological or physical targets.^{1,2} Despite growing interest in integrative and complementary sciences, experimental validation of such traditional concepts using standardised laboratory methods remains limited. Water provides an ideal model system because of its sensitivity to environmental changes and its measurable physicochemical properties such as oxidation–reduction potential (ORP), pH and electrical conductivity (EC).^{3,4} Earlier experimental studies on Pranic Healing (PH) have reported measurable changes in the physicochemical properties of demineralised water and biological materials, providing preliminary support for the observations of the present study. For example, pH exposure to demineralised water was associated with reductions in surface tension and

contact angle.⁵ Such findings indicate that subtle external interventions may influence the structural organisation of water at a physicochemical level. Similarly, studies involving PH-treated fruits reported reductions in titratable acidity and total soluble solids (TSS), along with improvements in certain nutritional parameters during storage.^{6,7} In addition to experimental conditions, practitioner-related factors may contribute to variability in outcomes in intention-based interventions. Psychological constructs such as the “flow state,” characterized by sustained attention and task engagement, have been associated with enhanced performance across multiple domains.^{8,9} Similarly, traditional frameworks such as Triguna (*Sattva*, *Rajas*, and *Tamas*) describe qualitative aspects of mental disposition, which may influence cognitive and behavioural processes.¹⁰ These constructs, while originating from different paradigms, may provide useful descriptive variables for characterizing practitioner states in experimental settings. Tridosha classifications (*Vata*, *Pitta*, *Kapha*) have also been used to describe individual variability, although their relevance to physicochemical outcomes remains to be systematically examined.¹¹ Although previous studies have reported physicochemical changes in water and biological materials following Pranic Healing interventions, the available evidence remains limited by small sample sizes and methodological variability. Furthermore, no previous study has simultaneously examined physicochemical changes in distilled water together with practitioner psychophysiological characteristics, such as flow state, Triguna, and Tridosha, which may contribute to intervention variability. Addressing this gap, the present pilot study employed a randomised, assessor-blinded experimental design to investigate the influence of Pranic Healing on selected physicochemical properties of distilled water while characterising practitioner-related variables. By applying contemporary analytical methods to evaluate concepts derived from Indian Knowledge Systems, this study contributes to the scientific validation of traditional complementary health practices and aligns with United Nations Sustainable Development Goal (SDG) 3: Good Health and Well-being, which promotes research and innovation for evidence-based healthcare.

EXPERIMENTAL

Material and Methods

A three-arm, parallel-group, assessor-blinded, pilot, randomised controlled laboratory study with pre–post repeated measures. Analytical-grade distilled water was used as the experimental substrate. Samples were stored in pre-cleaned glass containers, sealed airtight to prevent contamination, and maintained under controlled laboratory conditions at 25 ± 1 °C using an incubator.

Experimental Design and Sample Allocation

Water samples were randomly allocated into two groups: (i) intervention group (Sample A), exposed to Pranic Healing, and (ii) control group (Sample B), which received no intervention. All experiments were conducted in triplicate to ensure measurement reliability and reproducibility.

Healer Participation and Assessment

Three certified and experienced Pranic Healing practitioners participated in the study. During each intervention session, practitioner-related parameters, including basic biometric details and subjective flow state, were recorded using standardised assessment tools.

Study Site

All experimental procedures and physicochemical analyses were carried out at *Ganesh Consultancy and Analytical Services (OPC) Private Limited, Mysore*, an ISO and FSSAI-accredited laboratory, under controlled laboratory conditions.

Study Design

A two-group (control vs. experimental), two-session, pre–post, assessor-blinded, pilot randomised controlled laboratory study, employing a Split-Batch Parallel Design with Staggered Post-Test Measurement.

Criteria of Pranic Healers

Eligible participants were certified Associate Certified Pranic Healers (ACPH), aged ≥ 18 years, and willing to provide written informed consent.

Sample Preparation

Twelve identical, pre-cleaned airtight glass bottles were each filled with 75 mL of analytical-grade distilled water under controlled laboratory conditions. Following preparation, the water samples were evenly distributed into the 12 bottles before the initiation of the intervention phase. Each bottle was subsequently coded and anonymised to ensure allocation concealment prior to group assignment. Throughout the study, all samples were maintained in airtight conditions to minimise exposure to ambient air and reduce the risk of contamination. The filled bottles were stored in an incubator set at 25 ± 1 °C to ensure a stable and controlled environment.

Allocation and Replication

For each experimental day, six samples were used and randomly assigned: three assigned to the intervention group (Pranic Healing) and three to the control group. Experiments were conducted independently on two consecutive days. Samples used on Day 1 were not reused or included in Day 2 measurements, ensuring independent observations and avoiding carryover effects.

Intervention Phase

Pranic Healing practitioners performed standardised energisation procedures on six allocated samples (intervention group) for a predefined duration under controlled laboratory conditions. The control samples ($n = 6$) were maintained in the same experimental environment without any intentional intervention. Environmental conditions, including temperature and storage setup, were kept consistent for both groups throughout the intervention period.

Healer Monitoring

Practitioner peripheral oxygen saturation (SpO₂), blood pressure (BP), and body mass index (BMI) were recorded before and after each intervention session using calibrated, non-invasive instruments under the supervision of a qualified medical professional. Subjective psychophysiological states were assessed using standardised instruments, including the Flow State Scale-2 (FSS-2), along with Triguna⁹ and Tridosha¹⁰ assessment scales, administered before and after each session.

Post-Intervention Measurements

Physicochemical parameters of distilled water, including oxidation–reduction potential (ORP), electrical conductivity (EC), and pH, were measured at predefined time points as shown in Table-1. All measurements were performed in triplicate, and mean values were used for subsequent analysis to ensure reliability and minimise instrumental variability.

Table-1: Experimental Timeline, Sample Allocation, and Measurement Schedule Across Study Phases

Phase	Session	Group	Time	n	Sample status
Pretest	Baseline (Day 1 morning)	Control	10.00 am	6	Measured
Pretest	Baseline (Day 1 morning)	Experimental	10.00 am	6	Measured
Post-test 1	Same evening (Day 1)	Control	4.00 pm	3	Measured
Post-test 1	Same evening (Day 1)	Experimental	4.00 pm	3	Measured
Post-test 2	Next evening (Day 2)	Control	4.00 pm	3	Measured
Post-test 2	Next evening (Day 2)	Experimental	4.00 pm	3	Measured

Physicochemical Analysis of Water Samples

The following physicochemical parameters of distilled water were measured using calibrated instruments under controlled laboratory conditions:

Electrical Conductivity (EC)

Measured using a digital conductivity meter (Elico CM-180/V032) and expressed in microsiemens per

centimetre ($\mu\text{S}/\text{cm}$).

pH

Determined using a calibrated digital pH meter and recorded in pH units.

Temperature: Measured using a laboratory thermometer and expressed in degrees Celsius ($^{\circ}\text{C}$).

Oxidation–Reduction Potential (ORP)

Measured using a calibrated ORP meter and expressed in millivolts (mV). All measurements were performed following standard operating procedures, with appropriate rinsing and stabilisation time between readings to minimise cross-sample interference and instrument drift.

Assessment of Practitioner Physiological and Psychological Parameters

Physiological and psychological parameters of Pranic Healing practitioners were assessed immediately before and after each intervention session under standardised resting conditions.

Physiological Measures

Body Mass Index (BMI)

Calculated as weight (kg) divided by height squared (m^2) and expressed in kg/m^2 .

Blood Pressure (BP)

Measured using a calibrated digital sphygmomanometer and recorded in millimetres of mercury (mmHg).

Body Temperature

Measured using a clinical thermometer and expressed in degrees Celsius ($^{\circ}\text{C}$).

Heart Rate (HR)

Recorded in beats per minute (bpm) using a standard monitoring device.

Respiratory Rate (RR)

Measured as breaths per minute under resting conditions.

Peripheral Oxygen Saturation (SpO_2)

Assessed using a pulse oximeter and expressed as a percentage (%).

Palmar Temperature

Measured using a surface temperature sensor/infrared thermometer and expressed in degrees Celsius ($^{\circ}\text{C}$).

Psychological Measures

Subjective psychophysiological states were assessed using standardised instruments, including the Flow State Scale-2 (FSS-2), along with Triguna⁹ and Tridosha assessment scales,¹⁰ administered after Pranic Healing.

Pranic Healing Intervention Protocol

Pranic Healing sessions were conducted by certified practitioners following a standardized procedure. During the intervention, practitioners remained at a distance of approximately 1 meter from the sealed glass bottles and performed the following steps:

- Invocation for intended focus and initiation of the session
- Cleansing procedure using specific visualisation techniques (“Light Whitist Green prana”)
- Energization of samples using focused intention (“White prana”)
- Stabilization and completion of the intervention process
- Repetition of the procedure where required, based on practitioner assessment
- Concluding step (thanksgiving/prayer) marking the end of the session

All intervention sessions were conducted under controlled laboratory conditions, with the practitioner maintaining a distance of more than one foot from the samples throughout the intervention, and without any physical contact.

Ethical Approval

The study was approved by the Institutional Ethics Committee, World Pranic Healing Foundation, India (Approval No. 01/2026). Written informed consent was obtained from all participants prior to enrolment.

RESULTS AND DISCUSSION

Physicochemical Changes in Distilled Water

Day 1 observation (Baseline Vs Day 1)

The physicochemical measurements obtained on Day 1 are presented in Table-2. Among the parameters evaluated, electrical conductivity (EC) exhibited the most consistent increase across both intervention and control samples. Although increases were observed in both groups, healer-treated samples generally demonstrated greater changes than the controls. In contrast, pH remained within a narrow near-neutral range and showed only minor fluctuations without a consistent directional pattern. Oxidation–reduction potential (ORP) displayed considerable variability across samples.

Table-2: Experimental Observations: Baseline vs Day 1 (04:00 PM)

Group	Healer 1	Control	Healer 2	Control	Healer 3	Control
pH Baseline	6.44	6.75	6.9	6.77	7.14	6.92
pH Post	6.77	6.97	6.95	6.96	6.98	6.99
pH Δ%	5.12	3.26	0.72	2.81	-2.24	1.01
EC Baseline (μS/cm, 25°C)	6.1442	6.2453	6.1604	6.2264	6.2358	6.4811
EC Post (μS/cm, 25°C)	8.8654	8.4231	9.4038	9.5577	9.5096	9.25
EC Δ%	44.29	34.87	52.65	53.5	52.5	42.72
ORP Baseline	39	8	0	7	-13	-1
ORP (mV) Post	7	-4	-3	-3	-4	-5
ORP Δ%	0.82051	-1.5	0	1.42857	0.69231	4

Day 2 observation (Baseline vs Day 2)

The Day 2 observations are summarised in Table-3. Similar to Day 1, EC increased in all samples, with comparatively larger increases observed in the Pranic Healing-treated group. The difference between intervention and control samples appeared more pronounced during the second experimental session, suggesting improved consistency of the observed pattern. pH remained relatively stable, while ORP continued to exhibit substantial variability.

Table-3: Experimental Observations: Baseline vs Day 2 (04:00 PM)

Group	Healer 1	Control	Healer 2	Control	Healer 3	Control
pH Baseline	6.26	6.75	7.11	6.79	6.95	6.84
pH Post	6.68	6.97	6.96	6.98	6.99	6.99
pH Δ%	6.71	3.26	-2.11	2.80	0.58	2.19
EC Baseline (μS/cm, 25°C)	6.1792	6.3208	6.1887	6.3019	6.3019	6.3611
EC Post (μS/cm, 25°C)	10.4811	9.2404	8.7788	8.8654	10.0673	9.4712
EC Δ%	69.62	46.19	41.85	40.68	59.75	48.89
ORP Baseline	36	7	-11	6	-3	3
ORP (mV) Post	21	4	4	4	3	3
ORP Δ%	-41.67%	-42.86%	136.36%	-33.33%	-200%	0

Demographic and Practitioner Characteristics

The demographic and psychophysiological characteristics of the three Pranic Healing practitioners are presented in Table-4. The practitioners possessed substantial healing experience (15–28 years) and demonstrated high levels of task engagement during the intervention, with Flow State Scale scores exceeding 4.4 out of 5. Triguna assessment indicated relatively higher Sattva than Tamas across practitioners, whereas Tridosha profiles showed expected inter-individual variability. These observations provide descriptive information regarding practitioner characteristics and may assist future investigations examining practitioner-related influences on experimental outcomes.

Table-4: Demographic and Practitioner Characteristics of Healers

Parameter	Healer 1	Healer 2	Healer 3
Age (years)	40	53	55
Gender	Male	Male	Male
Height (cm)	173	161	164
Weight (kg)	87	57	61
BMI (kg/m ²)	29.1	22	22.7
Years of Experience	15	25	28
Healing Hours/Week	34	36	7
Mock Session	Yes	No	No
Meditation Before Healing	Yes	No	No
Total Healing Time (min)	17	22	19
Flow state Mean Score (max 5)	4.58	4.42	4.69
Sattva	3.40	3.47	3.87
Rajas	3.68	3.37	3.32
Tamas	3.14	2.45	2.95
Vata	3.08	3.31	2.15
Pitta	4.31	5.15	3.77
Kapha	4.00	3.08	3.46

Physicochemical Changes Following Pranic Healing

The present pilot study explored whether Pranic Healing was associated with measurable changes in selected physicochemical properties of distilled water under controlled laboratory conditions. Among the parameters investigated, electrical conductivity (EC) emerged as the most responsive measure. Although EC increased in both intervention and control samples, healer-treated samples generally demonstrated greater increases, particularly during the second experimental session. This consistent pattern suggests that EC may represent a useful exploratory marker for investigating potential physicochemical correlates of Prana-based interventions. In contrast, pH remained close to neutrality throughout the experiment and exhibited only minor fluctuations, indicating that Pranic Healing was not associated with substantial changes in hydrogen ion concentration under the present experimental conditions. Similarly, ORP values showed marked variability across samples, making interpretation difficult because percentage changes were strongly influenced by low baseline measurements. Consequently, EC appeared to provide a more stable and interpretable parameter than pH or ORP in this exploratory investigation. The present observations are broadly consistent with previous studies reporting physicochemical changes in water following Pranic Healing, including alterations in surface tension and contact angle.⁵ Likewise, earlier investigations involving Pranic Healing-treated fruits reported changes in physicochemical characteristics during storage.^{6,7} While the specific parameters evaluated differ across studies, the present findings extend this emerging body of evidence by identifying EC as the parameter showing the most consistent variation under controlled laboratory conditions.

Psychophysiological State of Practitioners

All three practitioners demonstrated high Flow State Scale (FSS) scores (>4.4), indicating sustained attention, focused engagement, and deep task immersion during the Pranic Healing sessions. Such psychological consistency may help minimise practitioner-related variability during intention-based interventions, although no causal relationship with the observed physicochemical changes can be inferred. To further characterise practitioner-related factors, Triguna and Tridosha assessments from Indian Knowledge Systems were incorporated. The practitioners exhibited moderate-to-high Sattva scores with comparatively lower Tamas, suggesting mental clarity and emotional balance, while individual variations in Tridosha reflected constitutional diversity described in Ayurveda. Although the functional significance of these variations remains uncertain, previous studies have reported associations between Triguna, Tridosha, and Pranic energy sensations.^{13,16} The integration of modern psychometric assessment with traditional Indian psychological frameworks represents a novel contribution of this study and provides a foundation for future research investigating practitioner-related factors in Pranic Healing. These findings

also support the scientific evaluation of Indian Knowledge Systems and align with Sustainable Development Goal-3(Good Health and Well-being) by promoting evidence-based research on complementary healthcare approaches.

Potential Mechanistic Considerations

The observed increase in electrical conductivity (EC) in the intervention samples raises the possibility that practitioner-related factors, such as focused attention or altered psychophysiological states, may influence experimental outcomes. However, these variables were not directly evaluated, and no causal relationship can be established. The concurrent observation of high flow state scores, Sattva predominance, and comparatively higher EC values provides a basis for generating testable hypotheses and contributes to the limited evidence exploring practitioner-related factors in Pranic Healing research. Further studies employing rigorous environmental controls, objective physiological measurements, blinding, and independent replication are needed to elucidate the underlying mechanisms and confirm the reproducibility of these findings.

CONCLUSION

This pilot study found that Pranic Healing was associated with comparatively increased electrical conductivity (EC) of distilled water following repeated intervention sessions, while pH and oxidation–reduction potential (ORP) remained largely unchanged. The study also demonstrated the feasibility of integrating physicochemical measurements with practitioner psychophysiological assessments within an Indian Knowledge Systems framework. Although these findings are preliminary due to the pilot design and limited sample size, they provide a foundation for future investigations. Larger, well-controlled studies incorporating objective physiological measurements, advanced analytical techniques, and independent replication are recommended to validate these observations and elucidate the underlying mechanisms. By promoting rigorous scientific evaluation of traditional healing practices, this research contributes to Sustainable Development Goal(SDG)-3: Good Health and Well-being through the advancement of evidence-based complementary healthcare research.

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CONFLICT OF INTERESTS

The authors declare that there is No Conflict of Interest.

AUTHOR CONTRIBUTIONS

The present work is related to *SDG-3: Good Health and Well-being*. All the authors contributed significantly to this manuscript, participated in reviewing/editing and approved the final draft for publication. The research profile of the authors can be verified from their ORCID ids, given below:

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