

RESEARCH ARTICLE

Influence of pranic healing and mindfulness on respiratory function, physical endurance, and well-being: A randomized single-blind study among paramedical students

Supplementary File

Table S1. Baseline data assessment

Variables	Group	<i>n</i>	Mean	SD	Statistics
FVC (L)	MPH	40	2.58	0.55	$U = 665^{ns}$
	SPH	37	2.72	0.61	
FEV ₁ (L)	MPH	40	2.39	0.48	$U = 650^{ns}$
	SPH	37	2.51	0.56	
STST	MPH	40	37.58	7.06	$t = 0.624^{ns}$
	SPH	38	38.87	10.93	
Perceived stress	MPH	40	22.85	3.75	$t = 0.271^{ns}$
	SPH	38	23.08	3.72	
Mindfulness	MPH	40	26.23	3.35	$U = 650^{ns}$
	SPH	38	25.82	2.38	
Systolic blood pressure	MPH	40	108.89	14.74	$U = 603^{ns}$
	SPH	38	113.82	17.14	
Diastolic blood pressure	MPH	40	107.25	13.97	$U = 736^{ns}$
	SPH	38	114.08	14.37	
SpO ₂	MPH	40	96.98	2.88	$U = 629.5^{ns}$
	SPH	38	97.76	1.34	
Pulse rate	MPH	40	86.85	15.99	$t = 0.379^{ns}$
	SPH	38	88.24	16.33	
BMI	MPH	40	20.48	4.18	$t = -0.962^{ns}$
	SPH	38	19.70	2.72	

Abbreviations: BMI: Body mass index; FEV₁: Forced expiratory volume in one second; FVC: Forced vital capacity; ns: Not significant; SD: Standard deviation; SpO₂: Oxygen saturation; STST: Sit-to-stand test.

Table S2. Linear mixed model results for forced vital capacity (FVC)

Effect	$F_{(df)}$	η_p^2
Time	$F_{(1,72.16)} = 2.42^{ns}$	0.03
Treatment	$F_{(1,72.02)} = 0.54^{ns}$	0.01
Baseline mindfulness	$F_{(1,72.04)} = 0.83^{ns}$	0.01
Gender	$F_{(1,72.15)} = 6.86^*$	0.09
FVC		
Height (covariate)	$F_{(1,72.03)} = 33.39^{***}$	0.32
Time $\times$ treatment	$F_{(1,72.16)} = 2.82^{ns}$	0.04
Time $\times$ baseline mindfulness	$F_{(1,72.17)} = 1.63^{ns}$	0.02
Treatment $\times$ baseline mindfulness	$F_{(1,72.04)} = 0.46^{ns}$	0.01
Time $\times$ treatment $\times$ baseline mindfulness	$F_{(1,72.17)} = 3.45^{ns}$	0.05

Notes: $*p < 0.05$; $***p < 0.001$.

Abbreviations: df: Degrees of freedom; ns: Not significant.

Table S3. Sensitivity analysis of linear mixed models examining the effects of time, treatment, gender, and height on pulmonary function and STST outcomes

Outcome	Effect	$F_{(df)}$	η_p^2
FVC	Time	$F_{(1,72.26)} = 4.74^*$	0.060
	Gender	$F_{(1,73.17)} = 8.58^{**}$	0.110
	Height (covariate)	$F_{(1,73.02)} = 32.87^{***}$	0.310
	Time $\times$ treatment	$F_{(1,72.26)} = 2.19^{ns}$	0.030
	Time $\times$ treatment $\times$ gender	$F_{(1,72.27)} = 0.10^{ns}$	0.001
FEV ₁	Time	$F_{(1,72.16)} = 8.01^{**}$	0.100
	Gender	$F_{(1,73.00)} = 9.04^{**}$	0.110
	Height (covariate)	$F_{(1,72.84)} = 31.04^{***}$	0.300
	Time $\times$ treatment	$F_{(1,72.16)} = 1.51^{ns}$	0.020
	Time $\times$ gender	$F_{(1,72.16)} = 0.09^{ns}$	0.001
	Treatment $\times$ gender	$F_{(1,72.87)} = 1.13^{ns}$	0.020
	Time $\times$ treatment $\times$ gender	$F_{(1,72.16)} = 0.22^{ns}$	0.003
STST	Time	$F_{(1,74.00)} = 0.259^{ns}$	0.003
	Treatment	$F_{(1,73.00)} = 0.758^{ns}$	0.010
	Gender	$F_{(1,73.02)} = 2.636^{ns}$	0.035
	Height	$F_{(1,73.00)} = 1.714^{ns}$	0.023
	Time $\times$ gender	$F_{(1,74.00)} = 0.333^{ns}$	0.004
	Treatment $\times$ gender	$F_{(1,73.00)} = 0.341^{ns}$	0.005
	Time $\times$ treatment	$F_{(1,74.00)} = 2.238^{ns}$	0.029
	Time $\times$ treatment $\times$ gender	$F_{(1,74.00)} = 3.696^{ns}$	0.048

Notes: $*p < 0.05$; $**p < 0.01$; $***p < 0.001$.Abbreviations: df: Degrees of freedom; FEV₁: Forced expiratory volume in one second; FVC: Forced vital capacity; ns: Not significant; STST: Sit-to-stand test.

Core category-1: Energy experiences

The energy experiences category revealed pranic energy sensations (category-1), ranging from physical sensations of energy (tingling, body was shaking a lot, sometimes felt electricity movement in the body, prickling) and magnetic sensations (feeling magnetic, attraction between hands, something moving inside the body), as well as temperature awareness (the body was heated, hands and feet became hot during the sitting, cooling) and awareness of the presence of energy (some energy, something moving inside my body and hands and legs, somewhat experience between the hands). These experiences underscore the subjective nature of energy perceptions.

Benefits as comprehensive well-being and barriers associated with mass pranic healing and sham pranic healing

After the eighth-day intervention, the following questions were asked. What were the benefits that you encountered while participating in the study program? What were the barriers that you encountered while participating in the intervention? Responses were categorized under the second core category and its corresponding subcategories based on the emerging themes.

Core category-2: Comprehensive well-being

This core category integrates both mental and physical benefits, recognizing participants who experienced improvements in either or both aspects. It highlights the holistic impact of the intervention on overall well-being, reflecting the interconnectedness of mind and body.

Sub category-1: Mental benefits

Category of mental benefits participants reported experiencing during the intervention, highlighting positive changes in mental, emotional, and cognitive states. The responses were organized under four subthemes: Peace and calmness, improved mental clarity and concentration, relaxation, and emotional well-being.

Sub category-2: Physical benefits

This category captures the physical benefits participants reported during the intervention; responses are grouped into three subthemes: improved sleep, enhanced breathing, and general well-being. These themes highlight the physical improvements participants noted, reflecting the intervention's holistic impact on their health and overall physical state.

Sub category-3: Barriers

This category explores the barriers participants encountered during the intervention, focusing on challenges or discomforts that may have impacted their experience. The responses are grouped into two subthemes: Presence of barriers and absence of barriers. These themes highlight both the difficulties participants faced and instances where no significant barriers were reported.

The SPH group demonstrated a statistically significant decline in forced vital capacity after the intervention ($Z = 2.42, p < 0.05$); however, there were no notable changes in the mass pranic healing group. Likewise, forced expiratory volume in one second was shown to decrease significantly in the sham pranic healing group ($Z = 2.87, p < 0.01$); however, there were no significant changes in the mass pranic healing group (Figure S1).

In the mass pranic healing group, 11 participants reported energy experiences after the fourth session, compared to only one in the sham group. At the final session, 37 participants in the MPH group reported experiencing pranic energy sensations. The frequency of various energy-related sensations increased from the fourth session to the last session, including physical sensation of energy (20%–90%), magnetic sensation of energy (7%–15%), temperature awareness (0%–45%), and awareness of the presence of energy (2%–7%) (Figure S2). Among those reporting physical sensation of energy, 21 (52.5%) participants experienced tingling sensations, while 20 (50%) reported temperature awareness (19: Heat/warm, 1: Cold).

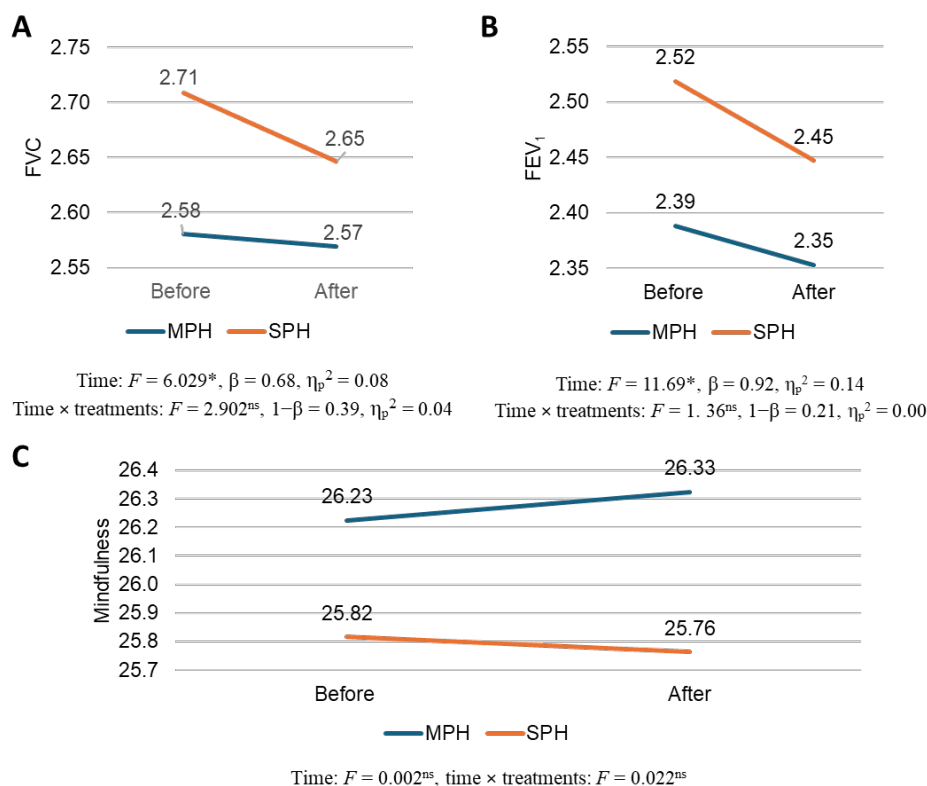


Figure S1. Changes in pulmonary function and mindfulness before and after intervention. (A) FVC change. (B) FEV_1 change. (C) Change in mindfulness. Note: $*p < 0.05$.

Abbreviations: FEV_1 : Forced expiratory volume in one second; FVC: Forced vital capacity; MPH: Mass pranic healing; SPH: Sham pranic healing.

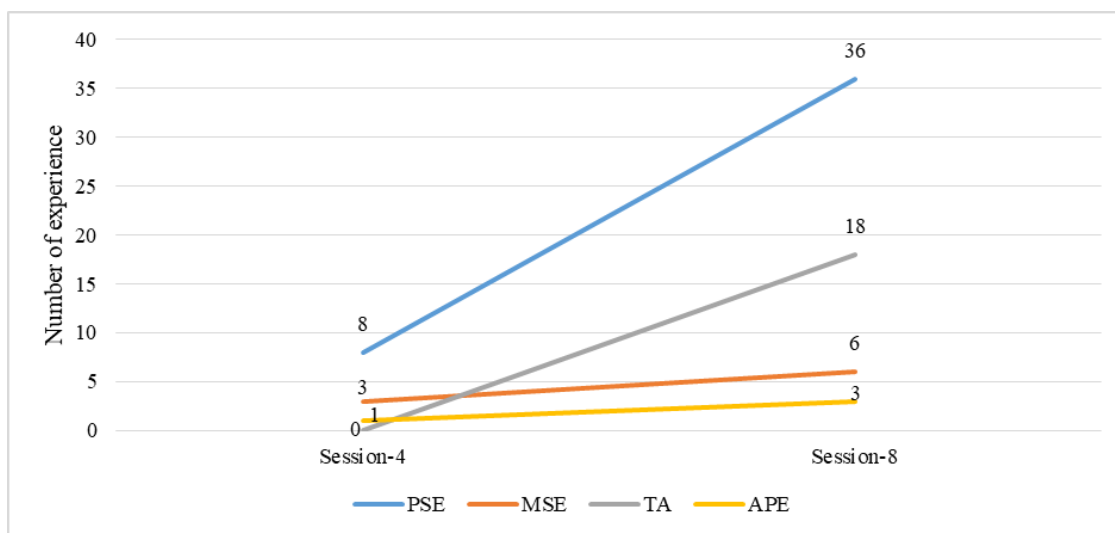


Figure S2. Pranic energy experiences reported during the fourth and final sessions of mass pranic healing participants

Abbreviations: APE: Awareness of presence of energy; MSE: Magnetic sensation of energy; PSE: Physical sensation of energy; TA: Temperature awareness.