

## Participant Experiences with Qi and Symptom Changes in Post-Acute Sequelae of COVID-19 (PASC) Through Qigong: A Qualitative Study from a Pilot Clinical Trial

Luis Fernando Morales<sup>1\*</sup>, Sofia Elena Castillo<sup>1</sup>, Carlos Andres Vega<sup>2</sup>, Mateo Julian Ruiz<sup>2</sup>

<sup>1</sup>Department of Management, Faculty of Economics, University of Chile, Santiago, Chile.

<sup>2</sup> Department of Business Administration, Facultad de Economía, Universidad de Buenos Aires, Buenos Aires, Argentina.

\*E-mail ✉ [l.morales.uchile@gmail.com](mailto:l.morales.uchile@gmail.com)

### Abstract

Post-acute sequelae of COVID-19 (PASC), widely known as “long COVID,” is a persistent, debilitating condition without established treatments that substantially affects quality of life. Qigong, a practice rooted in Traditional Chinese Medicine (TCM), may offer a novel therapeutic option for PASC. This study aimed to understand participants’ subjective experiences of qi and any perceived changes in PASC symptoms following participation in a clinical trial that combined group-based internal and external qigong sessions. A qualitative investigation was conducted with 26 participants who took part in a pilot feasibility trial examining qigong for PASC symptom management. The intervention involved six weekly sessions, each lasting two hours, combining internal movement-based and external qigong practices in a group setting. Upon completing the program, participants underwent semi-structured interviews. The recordings were transcribed, coded, and analyzed using conventional content analysis to explore participants’ perceptions of qi, their experience with the qigong sessions, and the perceived impact on well-being and PASC-related symptoms. Participants’ descriptions of qi varied considerably. Nearly all participants (92%) reported sensing qi during the sessions, describing a range of physical and energetic sensations. Around 75% reported improvements in at least one PASC-related symptom, with fatigue, cognitive impairment (“brain fog”), and sleep disturbances being most frequently noted. A majority (85%) also described enhanced overall well-being. Many participants highlighted the value of the group-based format as a positive element of their experience. The intervention was generally well-received, with most participants reporting awareness of qi and improvements in PASC symptoms and overall well-being. These findings suggest that combined internal and external qigong, delivered in a group format, could serve as a complementary therapy for individuals with PASC. However, given the small sample size and single instructor, findings should be interpreted cautiously. Further research with larger, diverse populations is needed to rigorously assess the effects of qigong in this context.

**Keywords:** Long COVID, Post-Acute COVID-19 syndrome, Qigong, Biofield therapies, Traditional Chinese medicine, Integrative medicine

### Introduction

Globally, over 65 million people—and approximately 6.9% of U.S. adults—have experienced post-acute sequelae of COVID-19 (PASC), or “long COVID” [1, 2]. This chronic condition can involve nearly every organ

system and manifests in a wide range of symptoms [3]. PASC is typically defined by the persistence of symptoms for at least three months following acute COVID-19 infection [4]. Commonly reported complaints include fatigue or post-exertional malaise, muscle and joint pain, cognitive challenges (“brain fog”), depression, anxiety, respiratory difficulties, and sleep disturbances [5]. Currently, no therapies have been validated for PASC, and the prognosis for affected individuals remains uncertain [2, 5]. PASC also imposes significant economic burdens, as 44% of patients report being unable to work and 51% reduce work hours, resulting in

Access this article online

<https://smerpub.com/>

Received: 29 July 2021; Accepted: 03 November 2021

Copyright CC BY-NC-SA 4.0

**How to cite this article:** Morales LF, Castillo SE, Vega CA, Ruiz M J. Participant Experiences with Qi and Symptom Changes in Post-Acute Sequelae of COVID-19 (PASC) Through Qigong: A Qualitative Study from a Pilot Clinical Trial. *J Med Sci Interdiscip Res.* 2021;1:168-76. <https://doi.org/10.51847/7IK7st9Icu>

an estimated \$50 billion in lost income annually, alongside increased healthcare costs of approximately \$9,000 per person [6].

Given the high prevalence and substantial impact of PASC, identifying effective therapeutic approaches is critical. Evidence suggests that integrative medicine practices may benefit various chronic conditions, and TCM-based therapies, including qigong, have been proposed as potential interventions for PASC [7–14]. In particular, external qigong—a type of biofield therapy—remains largely unexplored in this context. Biofield therapies, such as reiki, therapeutic touch, and external qigong, are based on the premise that a subtle energy field surrounds and permeates the human body, which can be influenced to support healing [15]. Although biofield therapies remain controversial, some studies indicate potential therapeutic benefits; for example, external qigong has been associated with reductions in chronic pain [16, 17]. Qigong practices involve cultivating “qi,” described as “a ubiquitous resource of nature that sustains human well-being and assists in healing disease” [18]. Over millennia, internal movement-based qigong (similar to Tai Chi) and external qigong (non-touch energy healing) have been refined and continue to be widely practiced.

Qualitative research provides valuable insights into participants’ personal experiences with qigong and their perception of qi [19]. Existing literature on this topic is limited, with few studies examining patients’ subjective experiences or interpretations of qi. This study sought to investigate the experiences of individuals with PASC participating in a group-based combined internal and external qigong intervention, with attention to perceived symptom changes, overall well-being, and participants’ understanding of qi.

## Materials and Methods

### *Participant recruitment and eligibility*

This qualitative study was embedded within a prospective randomized controlled trial approved by the UC Davis Institutional Review Board and registered on ClinicalTrials.gov (NCT05675995). The Standards for Reporting Qualitative Research (SRQR) were followed [20]. Participants were recruited via the UC Davis Pulmonary Specialty Clinic, affiliated primary care clinics, federally qualified health centers, Studypages, and social media platforms.

Eligible participants were English-speaking adults with a prior COVID-19 infection and persistent symptoms lasting more than 12 weeks. Individuals were excluded if they had COVID-related shortness of breath with parenchymal lung damage (or FVC <80% on pulmonary function testing), dementia, prior exposure to Agent Orange, active pregnancy, ongoing psychosis, mania, or severe depression, active infection, substance use disorders, or any other condition that could prevent them from completing questionnaires or attending qigong sessions. All participants provided informed consent before enrollment.

### *Study design and intervention*

Participants took part in a six-week program consisting of small-group qigong sessions, each integrating external qigong followed by a brief internal qigong practice. Sessions were led by a certified practitioner (MY), who during external qigong aimed to facilitate the release of stagnant or trauma-associated qi to support healing [21]. At the first session, participants received a short introduction to qi, including a “qi tangibility” exercise, in which they were guided to sense energy approximately six to eight inches above the practitioner’s hand and forearm.

During the external qigong portion, participants were seated comfortably and remained still while the practitioner’s hands hovered at a distance of at least six inches from the body, typically starting near the head and moving downward. Each treatment was tailored to the individual, with the duration and specific hand movements adapted according to the practitioner’s perception of the participant’s qi. Interventions concluded when the practitioner sensed that the qi had dissipated.

After everyone had received external qigong, the group engaged in a short internal qigong exercise designed for self-practice, enabling participants to manage residual or turbid qi between sessions [21]. Unlike movement-heavy internal qigong styles, this practice emphasized meditation and minimal exertion. It included three steps: (1) directing breath into the dantien, the body’s energy center located about three inches below the navel; (2) sensing a qi ball between the palms for several minutes; and (3) connecting with universal qi at the crown of the head while feeling energy in the hands and head.

Sessions lasted approximately two hours each, with groups ranging from two to nine participants. All sessions were held on Saturday mornings at a UC Davis-

affiliated primary care clinic, ensuring a private environment free from other patients or staff.

### *Qualitative interviews*

Within two weeks of completing the final session, participants were invited to take part in semi-structured interviews to share their experiences. All participants who completed the program participated. Interviews were conducted by one of two trained researchers (NA, MJ), who received guidance from an experienced qualitative researcher (MD). Each interview, lasting between 8 and 42 minutes, followed a consistent question framework, with prompts used to elicit more detailed responses. Participants were asked about their perceptions and experiences of qi, their engagement with qigong, perceived changes in PASC symptoms and overall well-being, and reflections on the study experience as a whole (**Table 1**).

**Table 1.** Semi-structured interview guide

1. How would you explain the concept and practice of qigong to someone who has never encountered it?
2. Did you notice any sensations, energy, or feelings associated with qi during the sessions, and did these change over time?
3. Over the course of the study, did you experience any changes in your long-COVID symptoms? Please provide details.
4. In what ways, if any, do you feel the qigong sessions influenced your symptoms or overall sense of wellness?
5. Are there any other reflections or insights you would like to share about your experience practicing qigong?

### *Qualitative analysis*

The interview recordings were transcribed and analyzed using a conventional content analysis approach [22], allowing the research team to explore participants' experiences without relying on a pre-established theoretical framework. Three members of the research team (NA, MJ, and MD) conducted the primary coding. NA, a clinical research coordinator, and MJ, a medical student, were involved in recruiting participants and collecting data, including recording attendance at sessions, but were not involved in delivering the qigong intervention. MD, an integrative medicine researcher with personal experience in internal qigong, had limited contact with participants. None of the coders had prior experience with external qigong.

The coding process began with each team member independently immersing themselves in one-third of the

transcripts, repeatedly reading sections and reflecting on participants' responses to identify emergent patterns, which were then developed into preliminary codes, categories, and subcategories. After this initial phase, the team convened to compare their individual codes and impressions, producing a draft collective codebook. This iterative process continued with the next third of transcripts, followed by discussion and refinement of codes, and was repeated until consensus on a final set of codes was achieved. Using the finalized codebook, NA and MJ re-reviewed all transcripts and quotes to ensure comprehensive representation of each participant's unique perspectives.

For the assessment of outcomes, NA and MJ independently coded whether participants reported perceived improvements in overall PASC symptoms, specific symptom changes, general well-being, and the degree to which they experienced or felt qi, while remaining blinded to each other's coding. Any disagreements were resolved by MD serving as a tie-breaker. In addition, participants had previously self-reported their PASC symptoms through free-text responses on baseline questionnaires, which were compiled to determine the frequency of different symptoms in the cohort.

## **Results and Discussion**

### *Demographics and baseline characteristics*

All 26 participants completed the intervention and participated in exit interviews, which were included in the qualitative analysis. Participants ranged in age from 25 to 79 years, with the majority being female (73.1%), and most identifying as White (84.6%), while 11.5% identified as Hispanic (**Table 2**). The average duration of PASC symptoms prior to the study was 24.7 months, ranging from 4 to 47 months. The most frequently reported symptoms before starting the intervention were fatigue, cognitive difficulties ("brain fog"), and shortness of breath (**Table 3**) [23].

**Table 2.** Participant demographics

Variable	Participants (n = 26)
Age, mean (SD), years	53.9 (14.1)
Sex	
Female, %	73.1
Male, %	26.9
Ethnicity	

Hispanic, %	11.5
Race	
White, %	84.6
Asian, %	7.7
American Indian or Alaska Native, %	3.9
Other, %	3.9
PASC symptom duration, mean (SD), months	24.7 (11.6)

**Table 3.** PASC symptoms reported by participants at baseline

Symptom	Percentage of Participants Affected
Fatigue	88 percent
Cognitive difficulties (“brain fog,” including problems with thinking or concentration)	73 percent
Shortness of breath	65 percent
Gastrointestinal issues (such as diarrhea, stomach pain, or constipation)	42 percent
Muscle aches (myalgias)	42 percent
Headache	38 percent
Heart palpitations or rapid heartbeat (tachycardia)	35 percent
Dizziness	35 percent
Sleep disturbances	35 percent
Joint pain (arthralgias)	31 percent
Worsening symptoms after exertion (post-exertional malaise)	27 percent
Loss of taste or smell	19 percent
Muscle weakness	15 percent
Memory difficulties	15 percent
Tingling or numbness (paresthesias)	15 percent
Chest discomfort, tightness, or pressure	15 percent
Anxiety	12 percent
Ringing in the ears (tinnitus)	12 percent
Vision problems	12 percent
Difficulty regulating body temperature	8 percent
Tremor	8 percent
Skin rash	8 percent
Positional orthostatic tachycardia	4 percent
Painful or difficult urination (dysuria)	4 percent
Depression	4 percent
Cough	4 percent
Menstrual changes	4 percent

Hair thinning or loss	4 percent
Reduced libido	4 percent

### Understanding of qigong

Participants were asked to explain qigong to someone unfamiliar with it, and their responses highlighted several recurring ideas. Many described qigong as a practice that works with personal energy, the energy of a practitioner, and that of others to promote healing and release energy blockages.

“There are energy centers in your body, and you focus on the flow of energy, identifying areas of blockage and releasing them.” (ID 16)

“I tell people it’s an ancient Chinese energy practice used to balance a person’s energy and remove blockages.” (ID 45)

“I see it as relating to your energy, with another person connecting to it to recharge or restore it—a kind of energetic connection.” (ID 43)

Some participants referred specifically to the practitioner, Dr. Yanuck, and his explanation during the initial group session.

“It’s about energy healing, and Dr. Yanuck described it as releasing retained energy from trauma, which made sense in the way he explained it.” (ID 18)

“Dr. Yanuck connected our energy to the universal qi, a blueprint our body can learn from, releasing energy from past trauma—emotional, mental, or physical—allowing the system to function at a higher level. In this study, it focused on addressing the multiple effects of long COVID.” (ID 30)

Qigong was also portrayed as a calming and restorative experience, a form of Eastern medicine and self-healing that taps into universal energy.

“For me, it helps me reach a restful state and connect with the energy in my body, aiming to release trauma-related energy accumulated from COVID.” (ID 6)

“It’s a way to connect with the central energy within your body and with the earth.” (ID 44)

“There’s an energy force I was aware of but never knew how to harness or utilize until now.” (ID 57)

Some participants chose to describe qigong using figurative language.

“It’s like living in an ordinary house, and then you lift a plank in the floor to find a diamond—and it’s not just under the floor anymore; suddenly, it’s everywhere, shining and full of power.” (ID 23)

While many focused on energy in their explanations, a few participants expressed that they were unsure how to articulate what qigong is.

“I don’t feel able to describe it because I don’t really grasp it myself.” (ID 14)

#### *Experience of qi*

Most participants (92%) reported sensing qi during the study, though the nature of this experience differed both between individuals and across sessions for the same person. Qi was frequently described as “energy,” sometimes taking the form of a ball or as a flowing movement throughout the body. Participants perceived qi within themselves, in others, and in the instructor, often noticing it most strongly in their hands.

“I initially felt it as a warm ball of energy. Later sessions expanded that feeling, with energy radiating throughout my body. At times, I could sense the energy from other participants too. It was strange, but in a positive way.” (ID 44)

The sensations associated with qi varied widely, including changes in temperature (warmth or coolness), breezes, tingling, electrical-like feelings, pressure, heaviness, or magnetism.

“I felt cool air moving from my hands and along my arm, a magnetic pull, and tingling at the crown of my head.” (ID 49)

“As the weeks progressed, I noticed cold sensations in my hands. Initially, I thought it was the air, but it was truly originating from my own energy—it was amazing to actually feel it.” (ID 10)

“During sessions, I experienced warmth, tingling, and a sense of relaxation.” (ID 39)

Some participants also reported physical responses or emotional shifts, including tension release or heart rate changes.

“There were interesting physical responses, like fluttering heartbeats, sweating, or feeling hot at times. I think these were manifestations of qi during the sessions.” (ID 12)

Overall, participants described their experience of qi as pleasant, relaxing, and non-painful.

“The sensation was generally relaxing and enjoyable, without any discomfort.” (ID 50)

#### *Effect of qigong on PASC symptoms*

When asked about changes in their PASC symptoms over the course of the study, 73% of participants reported some level of improvement in at least one symptom. Improvements in energy were most common, with 72%

noting enhanced overall energy, 39% reporting better cognitive clarity (“brain fog”), and 20% experiencing improved sleep.

“It helped with pain, memory, and brain fog—I think it improved everything. I felt better after each session, and the effects continued.” (ID 36)

“My sleep has significantly improved; I feel well-rested. My energy has returned, and I’m back to waking up early, as I did before COVID. My concentration and brain fog have mostly cleared.” (ID 21)

Other symptoms that participants reported improvement in included digestive issues, loss of smell, irregular heart rhythms, joint pain, headaches, and depression.

“I used to have arrhythmias multiple times a week, which made it hard to even walk or breathe. During the month I practiced qigong, I only had three episodes total instead of several per week.” (ID 35)

“My joints felt less achy, and I noticed my sense of smell was returning.” (ID 17)

“I truly believe qigong’s healing energy helped my heart return from rapid atrial fibrillation to normal rhythm.” (ID 63)

“My depression eased, and a COVID-related rash disappeared by the last day of class.” (ID 44)

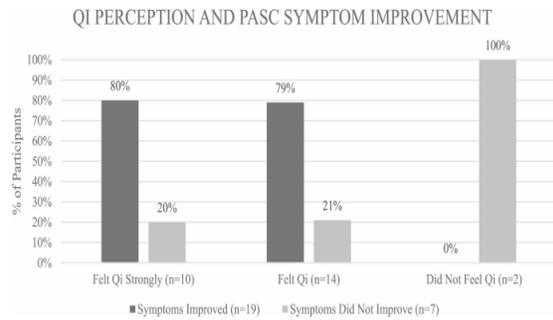
Among those who experienced symptom relief, the degree varied—from complete resolution to mild improvement. Some noted temporary changes, some saw improvement in certain symptoms while others persisted, and a few reported no noticeable change.

“My POTS is completely gone. My oxygen levels are stable, I’m back at work full-time, no longer bedridden, my muscles are strong, and I can play with my kids again. Qigong essentially gave me my life back—I feel like myself again, energized, focused, and social.” (ID 30)

“I’ve improved compared to the beginning, though it hasn’t fully cured my long COVID; it definitely helped.” (ID 9)

“I didn’t feel any noticeable changes during sessions, but it was still a positive experience. Whether it helped me remains to be seen.” (ID 11)

Participants’ perception of qi was linked to symptom improvement (**Figure 1**). Among those who sensed qi to any degree (79%,  $n = 24$ ), most reported symptom improvement, while the two participants who did not perceive qi experienced no change.



**Figure 1.** Qi Perception and PASC Symptom Improvement. Participants' reports of sensing qi and experiencing symptom improvement were drawn from interview descriptions. Symptom improvement was classified as sustained relief from PASC symptoms, ranging from partial to full recovery.

#### Group dynamic

Nearly all participants highlighted positive aspects of the group experience during interviews. They described a sense of community, as well as validation and understanding of what it is like to live with PASC.

“Being able to talk about what others were going through was as helpful as the qigong itself. Knowing that others shared similar experiences and exchanging stories really supported my mental well-being.” (ID 8)

“Some of my symptoms improved, and I felt better physically, but it also felt like group therapy. Being in person was important, as we could share our long COVID experiences and relate to one another.” (ID 39)

Several participants reflected on the meaningful experience of meeting others with PASC for the first time.

“I had never met anyone else with long COVID, since it's been so isolating. Attending weekly sessions and seeing others manage similar symptoms was really comforting.” (ID 50)

“Talking to someone else experiencing long COVID gave me a better understanding of the condition and a sense of relief.” (ID 20)

#### Well-Being and a shift in mindset

Participants were asked, “Do you think the qigong sessions affected your symptoms or sense of well-being in any way? Please explain.” Out of 26 participants, 22 reported improvements in their well-being, while the responses of the remaining four were unclear to coders; none explicitly stated that their well-being did not improve. Participants described various aspects of their

experience in the study and the practice of qigong that contributed to this improvement.

About 40% of participants reported an increased sense of calmness or relaxation, with some describing qigong as a meditative practice.

“Just sort of like being guided to meditate in a chair for a couple minutes was very calming.” (ID 16)

Several participants noted the benefit of continuing to practice qigong independently or with others in daily life.

“I now go to it at least once a day as a practice, which is also kind of like a meditation type of practice for me.” (ID 6)

“When I wake up with occasional chest pain, I do self-guided qigong outside, and it actually helps. I've used this several times.” (ID 36)

“If I do this before bed, or wake up during the night and can't sleep, practicing qigong helps me go back to sleep. I feel like I have a valuable, non-invasive tool that I can use for myself and share with others who may be suffering.” (ID 57)

Participants also described increased mental and emotional resilience to PASC symptoms and to everyday stress.

“Each week, I noticed my energy improving, my resilience to stress improving, and my stamina improving.” (ID 57)

“My symptoms are still present, but my reaction to them is different. I feel more comfortable with what is happening with me, which makes the symptoms feel less intense.” (ID 23)

“My symptoms are still here, like getting winded easily, but they don't bother me as much. Recovery is easier, and even after sleepless nights, my general outlook is better than before.” (ID 58)

Participants also reported an increase in hope and positivity as a result of the study.

“The study gave me acknowledgment, hope, and something to work with, which improved my attitude about my body and symptoms.” (ID 23)

“It gave me a more positive outlook.” (ID 43)

“For the first time, I could see being well as a real possibility. I'm not there yet, but just having that hope has been life-changing compared to feeling like I had to live this way forever.” (ID 58)

Within the context of a pilot randomized controlled trial on qigong for PASC, this study offers the first qualitative insight into the combined use of internal and external qigong for managing a medical condition. The focus was on understanding patients' experiences of qi and

exploring how participation in group-based qigong might influence both PASC symptoms and overall well-being. Most participants had no prior exposure to qigong, yet almost all reported sensing qi—an observation not previously described in the limited qualitative literature on this practice [24, 25]. Experiences of external qigong were diverse, with participants describing it as a flow of energy, a source of healing, or a calming and restorative experience. Some participants found it difficult to articulate their impressions of this form of energy work. These reports align with findings from other biofield therapies. Research on therapeutic touch, Reiki, pranic healing, and Magdalena energy healing has documented participants' experiences of bodily sensations such as warmth, heightened bodily awareness, relaxation, symptom modulation, post-treatment drowsiness, and an overall sense of benefit [26-29].

In terms of outcomes, 73% of participants observed some symptom relief, while 85% reported improved well-being. Interestingly, two participants who did not perceive qi also reported no improvement in symptoms. While our data do not clarify whether perceiving qi is essential for therapeutic effect, it appears that simply sensing qi may not be sufficient to guarantee benefits.

The intervention's positive impact across multiple bodily systems and on general well-being is consistent with other qualitative findings on biofield therapies. In this study, 40% of participants described heightened calmness or relaxation, compared with 68% reporting similar effects in a qualitative study of Reiki [27]. Studies investigating energy healing for irritable bowel syndrome and inflammatory bowel disease have reported mixed results, with some participants noting symptom improvement while others did not [26]. Similarly, Reiki studies among hospital nurses indicated improvements in sleep quality, though a minority experienced no benefit [30]. Overall, biofield therapies have been associated with enhanced sleep, physical health, and psychological well-being [27, 29, 31]. Moreover, prior qualitative work on internal qigong for cancer survivors and individuals with chronic illnesses has highlighted improvements in physical and mental health, general well-being, and social functioning [24, 25].

Participants emphasized that the group setting enhanced their experience, fostering a sense of community, validation, and the sharing of strategies for managing symptoms. Evidence suggests that group interventions can yield meaningful improvements in pain, self-efficacy, self-care, psychological well-being, and quality

of life across various chronic conditions [32]. Given the social isolation often reported by people with PASC [33], delivering qigong in a group format may be particularly advantageous and may have contributed to the beneficial outcomes observed in this study.

Several design features of this pilot feasibility study limit the generalizability of the findings. The study had a small sample size and relied on a single qigong instructor, which may have influenced participants' experiences. Additionally, the intervention was multimodal, incorporating external qigong, internal qigong self-practice, and group-based sessions, making it difficult to isolate the specific contribution of each component. It is also possible that these elements interacted synergistically—for instance, internal qigong self-practice might have heightened participants' responsiveness to external qigong, or vice versa. Differences in participants' descriptions of qi could reflect whether they were referring to external versus internal practices.

Another potential limitation is selection bias, as the study included only participants willing to receive external qigong, which may have skewed perceptions positively. Nevertheless, most participants reported minimal prior knowledge or initial skepticism about external qigong. Observing others' engagement with the practice may have encouraged openness in some participants.

Strengths of the study include achieving data saturation during qualitative analysis and conducting interviews with all participants who completed the study. The interviewers and transcript analysts were independent of the intervention, and one of the coders did not participate in any interviews, reducing potential bias. Furthermore, because the interview questions did not specifically probe changes in individual PASC symptoms, our estimates of symptom-specific improvements may be conservative. Future research should consider larger and more diverse participant samples, the involvement of multiple qigong instructors, potential participant blinding, and examination of individual intervention components (e.g., external versus internal qigong or their combination).

## Conclusion

This study represents one of the few qualitative investigations of qigong as a therapeutic approach for a medical condition, offering a novel view of patients' experiences and their understanding of qi. Most

participants reported perceiving qi during the intervention. The preliminary positive outcomes observed here suggest that further research is warranted to explore the potential benefits of qigong in this population.

**Acknowledgments:** None

**Conflict of Interest:** None

**Financial Support:** None

**Ethics Statement:** None

### References

- Fang Z, Ahrnsbrak R, Rekitto A. Evidence mounts that about 7% of US adults have had long COVID. *JAMA*. 2024;332:5.
- Chippa V, Aleem A, Anjum F. In: StatPearls, editor. Postacute coronavirus (COVID-19) syndrome. Treasure Island (FL): StatPearls Publishing; 2024. <https://www.ncbi.nlm.nih.gov/books/NBK570608/>.
- Department of Health and Human Services. Office of the assistant secretary for health. National Research Action Plan on Long COVID; 2022.
- Committee on Examining the Working Definition for Long COVID, Board on Health Sciences Policy. Board on global health, health and medicine Division, National academies of Sciences, Engineering, and medicine. A long COVID definition: A Chronic, systemic disease state with profound consequences. Washington, D.C.: National Academies; 2024.
- Dietz TK, Brondstater KN. Long COVID management: a mini review of current recommendations and underutilized modalities. *Front Med (Lausanne)*. 2024;11:1430444.
- Cutler DM. The costs of long COVID. *JAMA Health Forum*. 2022;3:e221809.
- Roth A, Chan PS, Jonas W. Addressing the long COVID crisis: integrative health and long COVID. *Glob Adv Health Med*. 2021;10:216495612110565.
- Carter ES. Acupuncture for the adjunct treatment of long COVID. *AAFP*. 2023;108(4). <https://pubmed.ncbi.nlm.nih.gov/37843933>.
- Estores IM, Ackerman P. Integrative medicine in long COVID. *Phys Med Rehabil Clin N Am*. 2023;34:677–88.
- Lin Y, Saper R, Patil SJ. Long COVID shared medical appointments: lifestyle and mind-body medicine with peer support. *Ann Fam Med*. 2022;20:383.
- O N JCPBBC. P S, S D. A potential therapeutic approach according to traditional Thai medicine theory for Post-COVID-19 syndrome treatment: an observational Retrospective Clinical Study. *PubMed*.
- Castro JP, Kierkegaard M, Zeitelhofer M. A call to use the multicomponent exercise Tai Chi to improve recovery from COVID-19 and long COVID. *Front Public Health*. 2022;10:827645.
- Feng F, Tuchman S, Denninger JW, Fricchione GL, Yeung A. Qigong for the prevention, treatment, and rehabilitation of COVID-19 infection in older adults. *Am J Geriatr Psychiatry*. 2020;28(8):812–9.
- J L, J W, X L, H S. The Role of Traditional Chinese Medicine in COVID-19: Theory, Initial Clinical Evidence, Potential Mechanisms, and Implications. *PubMed*.
- Matos LC, Machado JP, Monteiro FJ, Greten HJ. Perspectives, measurability and effects of Non-Contact Biofield-Based practices: A Narrative Review of Quantitative Research. 2021;18(12):6397. <https://pubmed.ncbi.nlm.nih.gov/34199174/>. <https://doi.org/10.3390/ijerph18126397>.
- Lee MS, Pittler MH, Ernst E. External qigong for pain conditions: a systematic review of randomized clinical trials. *J Pain*. 2007;8:827–31.
- Bai Z, Guan Z, Fan Y, Liu C, Yang K, Ma B, et al. The effects of qigong for adults with chronic pain: systematic review and meta-analysis. *Am J Chin Med*. 2015;43:1525–39.
- Jahnke R, Larkey L, Rogers C, Etnier J, Lin F. A comprehensive review of health benefits of qigong and Tai Chi. *Am J Health Promot*. 2010;24:e1–25.
- Warber SL, Bruyere RL, Weintrub K. A consideration of the perspectives of healing practitioners on research into energy healing. *Glob Adv Health Med*. 2015;4(1suppl):gahmj2015014suppl.
- O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative

- research: a synthesis of recommendations. *Acad Med.* 2014;89:1245–51.
21. Yanuck M, BioEnerQi. Bioenergy Publishing; 2024.
  22. Hsieh H-F, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res.* 2005;15:1277–88.
  23. CDC, Signs, Symptoms of Long COVID. COVID-19. 2024. <https://www.cdc.gov/covid/long-term-effects/long-covid-signs-symptoms.html>. Accessed 10 Sep 2024.
  24. Singh S, Nguyen T, Deleemans J, Oberoi D, Piedalue K-A, Carlson LE. A phenomenological qualitative exploration of mind-body therapy use and effectiveness among young, middle, and older adult cancer survivors. *Integr Cancer Ther.* 2024;23:15347354241253847.
  25. Bolton RE, Fix GM, VanDeusen Lukas C, Elwy AR, Bokhour BG. Biopsychosocial benefits of movement-based complementary and integrative health therapies for patients with chronic conditions. *Chronic Illn.* 2020;16:41–54.
  26. Soundy A, Lee RT, Kingstone T, Singh S, Shah PR, Roberts L. Experiences of healing therapy in patients with irritable bowel syndrome and inflammatory bowel disease. *BMC Complement Altern Med.* 2015;15:106.
  27. Dyer NL, Ali A, Baldwin AL, Kowalski S, Rand WL. An evaluation of the subjective experience of receiving reiki: qualitative results from a pragmatic effectiveness study. *J Integr Complement Med.* 2022;28:739–48.
  28. Mb MB, Kkk MSN, Sn S. J. Understanding pranic energy experiences: A qualitative approach. *Adv Mind Body Med.* 2023;37.
  29. Brueggemann AD, Ekwoye AU. Perceived benefits of Magdalena energy healing sessions: an exploratory study of clients' perspectives. *Healthcare.* 2023;11:3087.
  30. Jrd C, Ss M, Rg N, Fhde S, Dr P, Sg O et al. Reiki for promotion of health and sleep quality in hospital nursing professionals. *PubMed.* 2022. <https://doi.org/10.1590/0034-7167-2021-0535>
  31. Trivedi MK, Branton A, Trivedi D, Mondal S, Jana S. The use of biofield energy therapy as complementary and alternative medicine in human health care system: a narrative review and potential mechanisms. *J Complement Integr Med.* 2024. <https://doi.org/10.1515/jcim-2024-0027>.
  32. Jackson M, Jones D, Dyson J, Macleod U. Facilitated group work for people with long-term conditions: a systematic review of benefits from studies of group-work interventions. *Br J Gen Pract.* 2019;69:e363-72.
  33. Eberhardt J, Gibson B, Portman RM, Carthy N, Rowlands S, Batchelor R, et al. Psychosocial aspects of the lived experience of long COVID: a systematic review and thematic synthesis of qualitative studies. *Health Expect.* 2024. <https://doi.org/10.1111/hex.70071>.