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## Yoga therapy DYADS: A novel approach to chronic pain management in underserved populations

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### ABSTRACT

Yoga therapy is an emerging integrative health approach that applies the practices and teachings of yoga for individuals with clinical concerns. It is generally offered as individual sessions between a yoga therapist and client or in a small group setting with several clients who share a clinical concern. Here we describe a third model for consideration- the yoga therapy dyad. A dyad includes two clients working simultaneously with a single yoga therapist and differs from both individual and small group sessions in the potential benefits and challenges. The yoga therapy dyad model that is detailed here was implemented as part of a feasibility trial along with group acupuncture therapy for chronic pain in an underserved population. Underserved populations are at risk for pain and reduced access to care. This pilot may inform future research, policy, education, and clinical practice.

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### Introduction

There is growing evidence that yoga can be an effective strategy in chronic pain care. Observational research suggests that chronic pain is a primary reason for the initiation of yoga practice, including conditions such as low back pain and arthritis. Underserved and ethnically diverse populations are especially at risk for pain and pain undertreatment,<sup>1–4</sup> and these disparities are compounded when limited English proficiency impacts communication.<sup>2</sup> Underserved populations also have limited access to evidence-based nonpharmacologic pain care options like acupuncture and yoga.<sup>4</sup> It is well documented, for example, that yoga practice tends to be utilized by college educated Caucasian women.<sup>5</sup> While the gap has reduced slightly in recent years, there is still much lower uptake of yoga by racial and ethnic minorities.<sup>6</sup> Yoga therapy may be even less accessible due to the higher cost, small provider pool, and limited insurance reimbursement options.

Two primary models of yoga therapy care have emerged in the recent professionalization of the field.<sup>7</sup> These include private one-on-one sessions in which a yoga therapist meets with a single client, and small group yoga therapy in which several clients with a common concern experience a shared yoga therapy session.<sup>8</sup> In individual yoga therapy, the selection of yoga practices and recommendations

for those practices is guided by the individual client's priorities and concerns, as established in communication with the yoga therapist.<sup>7</sup> In group yoga therapy, the priorities and concerns of all group members must be balanced and taken into consideration in the development of an overarching group experience along with individual variations on that experience. In the competencies set for the by the International Association of Yoga Therapists, group yoga therapy is described as such:

Group Yoga Therapy is a session(s) in which a yoga therapist works with a small group of clients who have a similar condition or symptom(s), or with clients who have a variety of health or health-related conditions. A hallmark that differentiates group yoga therapy from group yoga teaching is the presence of an individual intake and assessment for each client in the group prior to commencing the class, personalization of the practice(s) based on the individual assessment, and reassessment at regular intervals throughout a series of classes.<sup>9</sup>

While group yoga therapy is a shared experience that offers increased access for participants, it has an arc of therapy that does not allow for staggered entrances and exits. In our study, we wanted to ensure that no single participant will have an unreasonable wait-time between group acupuncture and yoga therapy. As a result, the study design team decided to balance these structures by providing abbreviated yoga therapy in pairs. This decision resulted in a

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somewhat novel model for the delivery of yoga therapy, which we have called a 'dyad'.

### The GAPYOGA study

The dyad model emerged in the design of the Group Acupuncture Therapy and Modified Yoga (GAPYOGA) pilot study,<sup>10</sup> which builds on prior acupuncture research in an underserved chronic pain population. The Acupuncture Approaches to Decrease Disparities in Outcomes of Pain Treatment (AADOPT-2) large RCT compared individual to group acupuncture therapy and found both individual and group acupuncture to be effective for chronic pain in a lower socioeconomic urban primary care setting.<sup>11</sup> The GAPYOGA study tests the feasibility of group acupuncture therapy followed by yoga therapy, given that both modalities have demonstrated effectiveness in chronic pain management.<sup>10</sup> It is hypothesized that, if feasible, bundling these two forms of care may maximize access and their distinct benefits in a synergistic manner.

In the development of GAPYOGA, there was a need to balance the standard of care for each included therapy, while also creating a feasible structure in which the two therapies could be experienced in succession.<sup>10</sup> In group acupuncture, participant-session starts are staggered.<sup>12</sup> The acupuncturist treats each participant individually, allowing them to rest with retained needles or after removal of needles while assessment of the next participant takes place. In essence, each participant is receiving individualized acupuncture care in a shared environment.

The yoga sessions, occurring individually or in pairs, begin in Week 3 of the intervention after acupuncture therapy has begun. An intake session is completed with the yoga provider in Week 2, following their second acupuncture therapy session. There are a total of 8 yoga sessions, each lasting 30 min. Participants are also provided with individualized recommendations for home practice between sessions, accompanied by handouts in either Spanish or English containing descriptions and images for each practice. The yoga practices are selected by the yoga provider according to the unique concerns and limitations of each participant. Ninety-four study participants were enrolled before the study was prematurely stopped due to the COVID-19 pandemic in March 2020.

The GAPYOGA yoga therapists contributed their reflections on the dyad model for future consideration within the yoga therapy profession. There were six yoga providers involved with the study, four of whom co-authored this perspective. The yoga providers included 5 females and one male, ages 27 to 62. Four were bilingual, speaking both Spanish and English and conducting yoga sessions in both languages. Three of the yoga providers self-identified with Hispanic ethnicity. They are all trained as yoga teachers (RYT-500) and/or yoga therapists (C-IAYT) and have specialized training in stress management, chronic pain, therapeutics, accessibility, and/or working with veteran populations with 7–22 years of professional experience.<sup>7</sup>

While the perspectives of yoga providers regarding this model are shared here, the perspectives of study participants will be reported separately along with other qualitative findings from the GAPYOGA study.

### A new model: the yoga therapy DYAD

The dyadic intervention model has generally been used with patients and their caregivers and most frequently found in the literature related to cancer care.<sup>13</sup> While not having the cancer diagnosis themselves, the caregivers may suffer from stress and poor physical health and benefit from interventions that support their well-being. The use of therapeutic yoga dyads has also been used for cancer patients and their caregiver or family member. One such study included couple-based gentle yoga for patients with advanced lung cancer and their family caregivers, focusing on "interconnectedness

of the dyad" and supportive care interventions.<sup>14</sup> Another study by Milbury et al. looked at gentle dyadic yoga interventions as a supportive care strategy for patients undergoing thoracic radiotherapy and their caregivers.<sup>15</sup> While the concept of treatment in pairs or among patient and caregiver is not new, our model is unique in that the dyad pairs were usually strangers to one another who shared a common health concern rather than a pre-existing relational pair doing the intervention together.

One-on-one yoga therapy benefits the client by providing a completely individualized treatment approach. The yoga therapist can focus care and attention exclusively on the priorities and challenges of the individual client without distraction or competing concerns. However, individual sessions can be costly and may be lacking the element of social support that group participation may foster. Group yoga therapy, on the other hand, may reduce feelings of isolation, which may be particularly common in chronic pain populations,<sup>16</sup> and perhaps especially among the underserved where race/ethnicity and socioeconomic factors influence access to pain care.<sup>17–19</sup> Yoga therapists involved with the GAPYOGA study suggested that group participation also may remove the focus from oneself and foster compassion, while providing an opportunity for community, support and accountability. It has been suggested that a switch from I to We can result in a shift from Illness to Wellness.

The dyad model combines some of the elements of individual care with some of the elements of group care, gaining the benefit of individual focus plus group connection to others, but also some of the challenges of each. Additionally, there are some ways in which a dyad differs from both existing models. Compared to a group dynamic, yoga therapists observed that the single relationship between the pair had more influence on the yoga therapy experience than any single relationship in a small group session. Many different types of dynamics occur in the dyad that color the session. One yoga therapist on the project explained it this way:

I've seen... one person be more motherly and sympathetic with another patient creating a calm, supportive environment. I've also seen two women get together in a pair and have a lot of fun with it, giggling, like two best friends. Sometimes, neither is the case and they each are focused more on themselves and their own experience. No two people come together in the same way and that is always interesting and sometimes unpredictable.

Additionally, the dyads in our intervention may or may not have a prior relationship. Some have been married couples while others have been strangers. Because that relationship is paramount to the experience in some cases, there can also be a more notable shift when the pairs change. This can happen when someone is absent and a dyad becomes an individual session, when one participant "graduates" from the program and the pairing changes, or when there is a shift due to schedules and availability.

As with group yoga therapy, we have ensured that the dyads share the common concern of a chronic pain condition that serves as the focus of care. And while this is a bilingual study, we worked to ensure that dyads have the same preferred language, to reduce challenges in providing bilingual care simultaneously and to better foster ease of communication all around. Our yoga therapists noted that participants in a dyad also share a willingness to try something new and commit to a program focused on their health and wellbeing. The shared experience of using acupuncture and yoga in combination may also be a point of connection in this study that could differ from other dyad scenarios. As one yoga therapist put it:

Unlike an individual session, in the dyad, participants bond with and share experiences with other participants. They may have similar pain conditions, or can relate to each other's pain, and may also both be trying acupuncture and yoga for the first time...

I think offering both acupuncture and yoga provides the participants with a larger toolbox – and the different modalities approach pain care in a different way.

Additionally, the social support of a dyad may have benefits beyond the context of the yoga session itself and may result in a closer connection than might exist in a larger group setting.

I have witnessed dyads where the participants encourage each other and feed off one another. In one case I heard the dyad talking about plans together outside of the session, and they even invited a participant who had a session after their dyad to join. I think there is also a sense of accountability knowing that your teammate or dyad partner is expecting you to show up and do the work. Being a part of dyad also helps participants know that they are not alone. Some people may think they are the only ones going through this type of condition, but when set up with a partner that is along with you for the duration of the study, you know that you have support.

There was also the suggestion that while the yoga therapist builds a rapport with the client and provides both support and compassion, that kind of connection differs from what a peer with a similar experience might bring to the session, including both shared understanding and encouragement.

The sympathy to another person's pain can be much more supportive than my sympathy, due to a mutual understanding of pain. I've noticed if they start out in a dyad, they are more likely to feel comfortable doing things if they see the other patient is comfortable doing certain poses or breathing exercises that are out of the ordinary for them.

While some dyads are comprised of two individuals with similar background, condition, or experience, this is not always the case. One yoga therapist worked with a dyad in which one participant was 30 years old and the other was 80, but this did not seem to interfere with the connection and support they shared:

They had different yoga practices- one was on a yoga mat the other doing a chair yoga practice. They had such a beautiful understanding and caring for one another. The younger client was so patient and loving toward the elder. They formed a deep care and connection on both sides, where family members may not be able to provide that level of understanding because they are not in it.

The dyad model offers some unique opportunities, synergies, and alignment, but can also involve challenges that differ from the two existing models of yoga therapy. In the GAPYOGA study, yoga therapy is provided as a short educational intervention of just 35 min with individualized take home instructions, rather than the more common yoga therapy session duration of 60–90. This brief intervention is perceived as more challenging for yoga therapists with dyads than with individual clients given the individualization of practices and guidance for two people rather than one. Another challenge is that participants do not necessarily start as a dyad. One participant might be in their 5<sup>th</sup> week of the intervention when another participant begins yoga. Yoga therapists are therefore juggling different pain conditions, different ages, different physical limitations, and different levels of exposure to yoga, let alone the inevitable absences that occur, especially when working with chronic pain and underserved populations.<sup>20,13</sup>

When the participants are on different weeks of the intervention and/or at very different ability levels, it can be challenging to make sure you are meeting the needs and goals of both. When

one of the two from the dyad frequently misses sessions that can cause additional challenges in terms of progress.

Additionally, when one participant appears to need more attention, it can be challenging to meet those needs while also attending to the other client and creating a safe, comfortable space and dynamic for them both. This is true in small groups but may feel even more heightened in a dyad. That being said, such situations may turn out fine, especially when well-managed by the yoga therapist. One provider recalled:

The very first dyad I had was with 2 female patients. Patient A was in acute distress and had a very dynamic, strong presence and she kind of hijacked the treatment. I was a rookie trying to set boundaries and was worried how Patient B would respond. Luckily, Patient B just went with it and the session was well received.

Sessions occurring in Spanish brought up different challenges. While the study design ensures monolingual dyads (both prefer English or both prefer Spanish), Spanish speakers living in the US can be from different regions, using different vocabulary from each other and from the yoga therapist.

In the case of the GAPYOGA study, we have not only dyads for the patients (two patients attending yoga session at same time) we also have a team approach to the care in that there is an acupuncturist and yoga provider working with the same patients who receive acupuncture treatment followed by yoga. When participants come into yoga session, they will have just completed an acupuncture session. Usually that session overlaps with the session of their dyad partner, so they are receiving acupuncture together prior to coming in for yoga. The acupuncture session typically has relaxed the participants and often provided some pain relief, so participants come to yoga more at ease and potentially with less pain, allowing them to participate more fully. One yoga provider reported that patients are a bit “spaced out” but that they do seem “ripe and ready for yoga” after having received acupuncture. Another reports that “they are typically not in fight or flight” (anymore), but occasionally they are still very agitated and irritable. A third provider suggested a different concern that may result from this model:

Starting in acupuncture, the patients arrive already relaxed and a lot of times-with less pain. I was skeptical in the beginning that this is a beneficial model for us on the yoga side as some patients come to us sleepy or a little lethargic. However, I think we are able to jump into things faster if there is less pain and calmer than normal. My only concern is that the yoga may be harder to replicate in their home as a tool they can use when they are not feeling well. It is a possibility they may only want to use yoga when they feel better than normal.

### Chronic pain DYADS

Introducing this novel model as a chronic pain intervention has its particular considerations that may differ from the use of dyads in other populations. Certainly, the specific practices applied would vary according to the population as well as the implications of dyad pairing. The providers felt that individuals with chronic pain often feel overlooked and have tried many approaches without sustained effective management. Even when the origin, location, or etiology of the pain differs, there is a mutual understanding between two people in pain. This may also apply in other populations, but there may be some populations for which the relatability differs. It is also important to consider that participants were not excluded for having multiple comorbidities, so while everyone in the study shared the experience of chronic pain, they often had several other physical and

mental health challenges which complicates a condition-specific dyad experience. One yoga therapist suggested, however, that underlying the challenges of any population are the universal issues of pain and stress management. Yoga therapy can address those two related concepts across conditions. Issues of depression and isolation seem common and unlike some other chronic conditions, like diabetes, for example, chronic pain conditions issue a constant physical reminder of one's limitations.

### Dyads with underserved population

Underserved populations are at risk for pain and reduced access to care including to acupuncture and yoga, and therefore may be more intimidated by the prospect of trying it out, even when it is made accessible. Underserved individuals with chronic pain, especially those using pharmacological pain management strategies, may feel mislabeled or overlooked. Having dyad sessions may help ameliorate some of the fear or trepidation around trying a new modality. While there may be sites offering sliding scales yoga therapy payment, a dyad model might help to reduce cost even further while allowing for more individualization than group yoga therapy with more people. For acupuncture and yoga to be offered in tandem is a unique offering, especially for this population. Most underserved patients would likely not have the opportunity to engage in both of these healthcare approaches on a weekly basis, as provided in this study.

Other considerations for bringing yoga therapy to underserved populations transcend the dyad model, as described here:

The impacts of the patients being underserved, urban, and non-native English speakers cannot be covered in just a few sentences. One of the main points is that the medical system does not generally work very well for them which impacts whether they feel yoga/acupuncture will work. From my personal experience, I know you have to be able to do your own research, be your own advocate, ask questions, and be proactive in what you need. People in underserved communities generally lack the resources and knowledge to do this. A lot of people do not understand their own diagnosis or how to properly treat it besides the medication they are taking. This is exacerbated for the non-native English-speaking population who may have language barriers and not always get the proper translation they need. Since yoga is not accessible for most people, they most likely have very little experience with it, which may factor into acceptability. Also, the image of the typical yogi as a thin white woman, bending like a contortionist furthers the feeling that yoga is not for people like them. Culture is also a big determinant of their views and trust in medical care in general. Specifically, it's not uncommon for people to ask if yoga is a religion.

And while these challenges persist regardless of the yoga therapy model (individual, group, or dyad), the relatability of the dyad may help to ease some of these tensions. If the two members of the dyad have a shared cultural background, language, or religious orientation, the connection that is fostered in the dyad might serve to instill greater comfort and/or trust with the process and therefore potentially better effectiveness.

### Application to other settings

Our team decided to share this model with the expectation that it might be useful, relevant, or applicable to other settings, including private practice, yoga studios and other institutions. It may help to lower cost for the individual or organization compared to one-on-one sessions of yoga therapy and might increase accountability and thereby decrease attrition. In future research, dyads may provide

greater individualization compared to more common group sessions, but with greater efficiency by doubling the number of participants receiving care in a given timeframe over individual sessions. If dyads are presented as an available model of care, persons may choose to participate with a supportive loved one. An example was a married couple in the GAPYOGA study who enjoyed sharing a yoga therapy session together after their workday ended.

Our yoga therapy sessions were abbreviated (35 min) compared to the more typical 60–90 min. Future research should determine the effectiveness of abbreviated sessions with individualized take home instructions in fostering ongoing engagement with yoga practices and changes in outcomes such as pain. Allowing dyads for these abbreviated sessions creates even greater efficiency with 4 persons receiving care in just over one hour rather than a single patient. There has been very little research to determine the minimal effective dose of yoga, and the relative benefits of direct instruction and subsequent home practice. Because these sessions are highly individualized, they may foster greater uptake of practice recommendations over a general class model and specifically in an underserved, multi-morbid and differently-abled community.

### Recommendations for the field

Overall, based on our team's experience, we recommend the dyad format as another option for delivery of yoga therapy. As one yoga therapist put it:

I think the dyad format for yoga sessions is a great option in addition to small group and individual yoga therapy sessions. Someone who may be timid about setting up an individual session or cannot afford it may receive similar benefit from a dyad format. In addition, they may connect with the other participant in the dyad, forming bonds, relationships, and an accountability structure.

However, we also recommend some considerations for yoga therapists interested in utilizing this model, especially in an abbreviated format or in an integrative care setting.

- Give yourself ample time to travel and get set up. Preparing for two people is a bit more complicated than an individual session and self-care is especially important for managing energy and attention.
- Charting for two clients simultaneously means orienting yourself to the clients' charts in advance to understand their care trajectory and plan. It also requires taking some notes during the session and allowing some time after the session to finish charting. If you see too many consecutive dyads without time for charting, it can be challenging to remember exactly what happened during the sessions. Seek out additional training or guidance in charting as needed.
- Follow same Health Insurance Portability and Accountability Act (HIPAA) guidelines used for group yoga therapy to protect the privacy of each individual participant.
- Communicate with other care providers when possible to better understand the related needs and challenges of both participants in the dyad. This may include medical providers and/or other integrative health providers. In this study, communication between yoga therapists and acupuncturists has been a key to optimal care.
- Don't be put-off by the possibility of incompatibility between clients. It's not very common and the benefits of the supportive environment exceed those provided by the yoga therapist alone. However, do pay attention to any possible incompatibility and consider whether it can be a part of the work toward healing or should be addressed by adjusting the dyad.
- Sometimes very different clients can be a good match for a dyad. The client with more experience can lead or guide the less

experienced client when new practices are introduced. This can be empowering for the more experienced client and it can set a realistic model of progress for the newer client. It can foster trust and connection between them that is different from the therapeutic relationship with the yoga therapist.

- Ensure that the clients in a dyad are getting individualized guidance to meet their distinct concerns, including different practice modifications and personalized instructions for home practice, such as handouts with appropriate images, added notes and tailored instructions.

## Conclusion

To date, there has been very little research to determine optimal yoga dose, either in general yoga practice or in yoga therapy. This includes frequency, duration, and intensity. There has also been very little research on the comparative effectiveness between group yoga therapy and individual yoga therapy, or between yoga therapy and general yoga practice, let alone the emerging concept of a yoga dyad. Such research, both quantitative and qualitative, is needed to optimize care for various clinical populations who may benefit from yoga as part of ongoing disease management, including underserved populations with chronic pain. The introduction of this model creates a new variation on yoga dyads that will need further study to determine both widespread feasibility and effectiveness for important clinical outcomes. While our team has found it to be a beneficial model anecdotally, that may not bear out in populations or settings that differ from this interdisciplinary, hospital-based chronic pain research intervention. As the research and practice of yoga therapy progress, new options for providing optimal care may continue to emerge and warrant further study and consideration.

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