

A Qualitative Study Exploring Community Yoga Practice in Adults with Rheumatoid Arthritis

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Abstract

Objective: Yoga may improve physical function and reduce disease symptoms in adults with rheumatoid arthritis (RA). However, little is known about how patients with RA are practicing yoga in the community. The objective of this qualitative study was to explore community yoga practice characteristics and thoughts about yoga practice for adults with RA.

Design: Participants completed a semi-structured telephone interview with open-ended questions. Thematic analysis was used to analyze interview transcripts.

Participants: A convenience sample of 17 adults with rheumatologist-diagnosed RA who had participated in yoga within the past year were asked about the decision to start, continue, and stop yoga; the perceived benefits of yoga; components of yoga sessions; and general thoughts about yoga as it relates to RA.

Results: Although eight different styles of yoga were practiced, commonalities in yoga class components (such as stretching, strengthening, deep breathing, meditation, and positive messaging from the instructor) reveal examples of preferred types of yoga for patients with RA. Three main themes emerged, each with multiple subthemes: (1) motivators (physical fitness, influence of others, reduced price), (2) barriers (cost, symptom burden, class difficulty), and (3) benefits of yoga practice (mind–body, a tool for coping, pride/achievement, social, and “yoga meets you where you are”).

Conclusion: In this study, patients with RA described how yoga practice helped improve physical and psychosocial symptoms related to their disease. Yoga practice, a dynamic exercise, encompassing many different styles, can provide many benefits for adults with RA; however, yoga may not be beneficial for every adult with RA.

Keywords: rheumatoid arthritis, yoga, qualitative, physical function, symptoms

Introduction

RHEUMATOID ARTHRITIS (RA) is a prevalent chronic inflammatory autoimmune disease that affects at least 2 million adults in the United States and is characterized by pain, stiffness, reduced quality of life, fatigue, depression, and loss of physical function.^{1,2} The American College of Rheumatology recommends physical activity and stretching, strengthening, and conditioning exercises to preserve physical function and reduce disease symptoms in adults with RA.³ However, few of these physical activities have demonstrated benefits for emotional and psychological symptoms experienced by this population.

Studies that evaluate the use of therapeutic mind–body exercises, such as yoga, for improved physical function in adults with RA are beginning to emerge in the literature, with promising results.^{4–9} Participants in yoga programs reported reduced pain, disability, fatigue, and depressive symptoms, as well as improved physical function, sleep, mood, general health, and grip strength.^{4–6,9–11} Yoga offers patients with RA a way to improve their physical and mental health by incorporating meditative breathing with physical exercise.^{12,13} In fact, yoga is the most popular complementary medicine practice used in the United States; chronic pain conditions are reported as the number one reason for its use.^{14–16} In addition, there are several

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arthritis-specific yoga classes, sequences, and pose modifications.^{7,12,13,17,18}

Studies that demonstrate the effectiveness of yoga for improvement of physical and psychological symptoms are important because patients with RA often express an interest in nonpharmacologic management strategies.¹⁹ To date, however, little is known about how patients with RA are practicing yoga in community settings. Previous qualitative studies have explored RA patient attitudes about yoga, requirements for practice, and perceptions of yoga practice on physical function, pain, and mood, but no studies have used qualitative methods to evaluate how adults with RA are participating in yoga in the general community.^{10,20}

The objective of this qualitative study was to explore yoga participation as a symptom management strategy in adults with RA who acknowledged that they participated in yoga at some point in the past year. Findings from this study are needed to provide an understanding of community yoga practice in adults with RA, specifically how and why yoga is being practiced, by whom, and what factors influence yoga participation.

Materials and Methods

Setting, participants, and study design

Participants were a convenience sample of patients with physician-diagnosed RA from outpatient rheumatology clinics in northern California who participated in the University of California, San Francisco (UCSF) RA Cohort telephone survey in 2013. Inclusion criteria were age 18 years or older, physician-diagnosed RA, English speaking, and having responded that they participated in yoga within the past 12 months in the previous year's telephone survey. Institutional review board approval was acquired from the UCSF Committee on Human Research. An introductory letter explaining this study and requesting interviews was sent via U.S. mail to the 42 eligible patients. Two telephone attempts were made to contact eligible participants: Twenty-two could not be reached by telephone, 17 completed the telephone interview, and 3 declined participation.

Data collection and analysis

Data collection began January 2015 and ended March 2015. Interviews were conducted via telephone by using a structured interview guide with open-ended questions. The open-ended questions were framed by the Symptom Management Theory and addressed how and why the participants practiced yoga and general thoughts about yoga participation (Table 1).²¹ The audiotaped telephone interviews were conducted by a single researcher (H.M.G.) and

lasted approximately 30 minutes. These digitally recorded interviews were transcribed by hand by the first author. Thematic analysis was used to code interview transcripts to determine key themes.²²

Briefly, thematic analysis involves an iterative process in which the text of the interview transcripts are analyzed to identify emergent ideas, which are described as codes and collapsed into larger themes. The first author coded the transcripts and transformed the codes into themes. Themes as well as relationships between the themes were discussed between two researchers (H.M.G., H.L.) to create the final set of themes. To ensure scientific rigor, an experienced qualitative researcher (S.R.G.) validated whether the identified categories were in agreement with the raw data. In addition to the qualitative data, participant scores on the Health Assessment Questionnaire (HAQ) were also gathered. The HAQ is a 20-item self-reported measure of functional disability and is the most commonly used measure of functional ability in adults with RA.^{23,24} Demographic and quantitative data were analyzed by using SPSS software, version 21.0 (IBM, Armonk, NY).

Results

Average participant age was 56 years; most participants were white and female, with bachelor's or graduate degrees. Average disease duration was 21 years (range, 5–44 years) (Tables 2 and 3). The average participant HAQ score was 0.93, indicating mild to moderate difficulty performing tasks of everyday life. Yoga styles practiced by participants

TABLE 2. DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF PATIENTS WITH RHEUMATOID ARTHRITIS

Variable	Interview participants (n = 17)	Nonparticipants (n = 25)
Mean age (SD) (yr)	56.1 (10.7)	49.0 (14.9)
Female (n)	16	24
Race/ethnicity (n)		
White	12	19
Asian	2	2
Black	1	2
Other	2	2
Mean disease duration (SD) (yr)	20.9 (10.7)	21.2 (13.6)
Mean HAQ score (SD)	0.93 (0.69)	0.85 (0.64)
Education (n)		
High school graduate	1	3
Some college (less than bachelor's)	5	6
College graduate/bachelor's degree	5	7
Master's/PhD/professional degree	6	9
Employment ^a (n)		
Part-time (≤20 h/wk)	3	2
Full-time (≥21 h/wk)	7	12
Retired	7	4
Other	0	7

^a $p < 0.05$.

SD, standard deviation; HAQ, Health Assessment Questionnaire.

TABLE 1. INTERVIEW GUIDE, OPEN-ENDED QUESTIONS

Why did you decide to try yoga for the first time?
 What benefits did you experience after practicing yoga?
 Why did you continue to go to yoga?
 What are the components in your typical yoga session?
 Why did you stop doing yoga/Why don't you do yoga more?
 Do you have any thoughts about yoga as it relates to your RA?

RA, rheumatoid arthritis.

TABLE 3. INDIVIDUAL STUDY PARTICIPANT CHARACTERISTICS

Study ID	Age (yr)	Sex	Yoga style practiced	Yoga practice duration	HAQ score	Disease duration (yr)
1	56	F	Unknown	1 class	1.75	36
2	67	F	Vinyasa	20 yr	1.75	30
3	72	F	Iyengar	7 yr	1.75	44
4	66	F	Gentle	2 yr	0.88	34
5	68	F	Vinyasa	30 yr	1.5	23
6	63	M	Gentle	4 mo	1.13	27
7	53	F	Vinyasa	2 yr	0.5	26
8	48	F	Iyengar	10 yr	1	18
9	57	F	Hatha	12 yr	0.25	11
10	35	F	Unknown	3 classes	0.13	16
11	48	F	Vinyasa	3 mo	0.38	10
12	53	F	Hatha	33 yr	2	12
13	65	F	Vinyasa hybrid	3 yr	0	11
14	67	F	Forrest	10 yr	1.38	22
15	42	F	Hot power flow	4 yr	0	5
16	47	F	Vinyasa	2.5 yr	0.25	15
17	47	F	Bikram	2 yr	1.13	16

ID, identification number; F, female; M, male.

varied from the very common *Vinyasa* to lesser known styles, such as Forrest and several styles in-between, such as, Restorative/Gentle and *Bikram* or hybrid styles created by instructors (e.g., “Joe’s yoga,” which is a combination of *Vinyasa* and *Ashtanga*). Two participants did not know the type of yoga practiced (Table 3).

Because yoga varies greatly between yoga style and instructor, participants were asked to describe the components of their yoga sessions. Yoga sessions included the following components: stretching, strengthening, aerobic physical exertion, breathing exercises, meditation, positive verbal statements from the instructor, spirituality, and chanting. Yoga sessions were practiced for an average of 56 minutes, about 3 times per week, and were located in a gym, a yoga studio, or at home. The average number of years practicing yoga was 12.6 (Table 4).

Three themes emerged describing the barriers or motivators to practicing yoga and the benefits that resulted from their yoga practice. These themes are illustrated by participant quotes in the following paragraphs and are identified by the participant study identification number; additional supporting quotes are provided in Table 5.

Theme 1: motivators

Participants described a variety of motivators for initiation and continuation of yoga practice, which are divided into the following subthemes: desire for physical fitness, being influenced by others, and reduced cost. Participants expressed a desire to improve physical fitness, such as wanting to build strength and improve flexibility, posture, and balance. For example, a participant said that she got started doing yoga because she wanted to be a better gardener.

“I was very much into gardening at the time and I wanted to be stronger in my legs so that I could lunge from side to side and carry more things and be stronger.” (9)

TABLE 4. YOGA PRACTICE CHARACTERISTICS

Characteristic	Yoga group (n = 17)
Yoga style practiced (n)	
Vinyasa	4
Restorative/gentle	4
Iyengar	2
Hatha	2
Forrest	1
Hot-power flow	1
Bikram	1
Hybrid styles	1
Can’t remember	1
Yoga session components	
Stretching	17
Strengthening	16
Aerobic physical exertion	11
Breathing exercises	15
Meditation	14
Positive verbal statements from the instructor	15
Spirituality	5
Chanting	2
Mean yoga duration [range] (SD) (min per session)	56 [30–90] (25)
Mean yoga frequency [range] (SD) (sessions per week)	3 [1–6] (2)
Mean years practicing yoga [range] (SD)	8.4 [0–35] ^a (11)
Yoga location (n)	
Gym	7
Yoga studio	5
Home (alone, or with an instructor, or with a video)	5
Currently practicing (n)	14

^a0 value is the result of having one participant only practice yoga one time ever.

Most people were drawn to yoga by a desire for improvement in their physical fitness; however, some were also drawn to yoga by the influence of others, such as friends, healthcare providers, societal influence, or discounted or free passes to class. One participant started at the suggestion of his physician:

“When I got into the Pain Management Program, they suggested that I get into yoga.” (6)

Other participants were influenced to start yoga by reduced price classes:

“I won a free one-month pass to a yoga studio at the auction at my daughter’s school.” (16)

Theme 2: yoga practice barriers

The following subthemes outline the main barriers to maintaining a regular yoga practice: cost, RA disease symptom burden, and class difficulty.

“My yoga instructor recommends that I do it twice a week, but financially I just can’t do that.” (3)

When participants were asked why they did not practice as much as they liked, cost was the main reason given, but

TABLE 5. THEMES, SUBTHEMES, AND ILLUSTRATIVE QUOTES

Theme	Subtheme	Illustrative quote	Study ID
Motivators	Desire for physical fitness Being influenced by others	"I'm older now and I needed to do something about balance and posture." "A group of friends here at work had talked about doing Bikram yoga, and there was a deal, so I tried it."	14 17
Barriers	Cost Symptom burden Class difficulty	"I would try it more if they offered it as a part of your health plan membership." "I stopped all the gym stuff, then started in the pool and worked up to yoga again." "it was really hard to bend my joints, I felt like it wasn't for me or people with arthritis."	1 8 10
Benefits	Mind-body A tool to cope Pride/achievement Social "Yoga meets you where you are"	"it helps with my overall mobility, I am able to move so much better ... I have improvement in pain, energy, mood ... I feel it's so worth it." "Yoga gets rid of the emotional stuckness and junk in your joints. It's just an emotional release, and I think that's what made me feel better. With RA there is an emotional component; the stressors get built up." "It is a confidence booster just in terms of just being able to be physical, and being able to participate in something that makes you feel good." "It was the fellowship, the people ... we start talkin' about other stuff instead of, whatever hurts, so that part of it is a big uplift." "I wasn't overwhelmed, so I wasn't like, 'oh my gosh, this is too hard for me, I can't go back,' so, it was just my right pace."	4 17 15 6 4

many cited increased disease symptoms, commonly called a "flare." One participant reported she could continue to exercise during a flare if she switched to a gentle-style class.

"When I had pain, as long as it was gentle enough I could do yoga when I was flaring, it would be something that would be useful to me." (7)

One could not continue practicing at all because of her persistent flares:

"I had to stop doing yoga because of my RA ... I actually tried yoga again recently, but it caused a flare, so, I've got to stop doing that." (5)

Two participants ceased their practice because of the difficulty of the class. However, both of these participants said they would like to try it again if there was a class suited to their needs.

"I would like to try yoga again but it would have to be in a therapeutic environment, I would need pillows or things that would help me to do the exercises. They didn't have them at the gym and I've never been to the yoga studio because they are more expensive." (1)

These quotes illustrate how physical limitations, symptom status, and cost acted as a barrier to yoga practice.

Theme 3: benefits of yoga practice

Influence of others and the desire for physical fitness were motivators to initiate yoga practice, but participants found many benefits that kept them coming back. The benefits subthemes included mind-body, a tool to cope, pride/achievement, social, and "yoga meets you where you are." Yoga participants discovered that in addition to the physical improvements in flexibility, strength, energy, pain, stiffness, and sleep disturbance, they also experienced mental and psychosocial benefits, such as improved mood, sense of calm, mental focus, healthy eating habits, coping skills, socialization, pride, and self-confidence.

"It just made me feel better, more flexible, calmer inside, stronger.... It helps my mood, outlook and energy." (5)

The physical practice of yoga also helped many of the participants lead healthier lives away from their yoga mat. One participant described how yoga helped provide inner discipline.

"I definitely feel improvement with less pain, less stiffness. I eat better, I sleep better, my focus is much better, more disciplined for the things that I need to stay healthy for my RA." (16)

Yoga practice as a coping tool emerged as a subtheme as participants described turning to yoga as a symptom management tool for their physical, mental, and emotional needs. One participant talked about how yoga helped her cope with the negative emotions associated with RA.

"I think the breathing and the meditation are a big part ... it's just, when you have RA you can get a lot of negative thinking and this really helps with that ... yoga is really helpful, like a tool to turn to." (3)

Similarly, another described how yoga helped her cope with mental aspects of her disease.

"It helps mentally with acceptance that you have a disease, allowing it to be a part of your life ... somebody with debilitating disease, we are kind of messed up mentally ... it does something to your head and makes you feel weak and small ... yoga changes the way you think about your RA." (15)

The benefits participants experienced were also linked to a sense of pride or accomplishment in their physical abilities and self-confidence.

"I was pretty proud of myself for getting through it ... when I do certain moves, I can feel pretty good about myself." (13)

In addition to the physical and mental benefits of yoga, the majority of participants found the social aspect of yoga to be beneficial.

"Yoga was amazing to me, how much strength and energy you build up and there's a social aspect of it ... we've developed pretty good friendships there." (13)

The many styles of yoga available allow practitioners to change styles or modify poses to suit their needs. Participants discussed how they changed yoga styles and modified poses to allow for their changing physical and emotional needs due to their disease status.

"When I first got RA, I couldn't even take care of myself or my kids... I started yoga and all I could do was lay there, it was just quiet time in the beginning ... now that my symptoms are under better control, I can do hot power yoga." (15)

This quote emblemises the subtheme "yoga meets you where you are" in that participants found that yoga is adaptive, with the many styles providing additional versatility such that yoga can suit the dynamic needs of a person with fluctuating disease symptom burden.

The participants chose to start yoga for different reasons, but many had the shared experience of improvement in RA symptoms. These experiences illustrate the participants' perception of yoga practice as an effective symptom management strategy for improved functional and emotional status and overall quality of life. Participants found benefits whether they were practicing gentle yoga or vigorous yoga.

Discussion

This qualitative study provides new and important insights into how adults with RA participate in yoga and their perception of its benefits for symptom management. This study reveals examples of what styles of yoga are available in the community as well as what types of yoga patients with RA gravitate toward. This sample of adults with RA preferred classes that included components common to many yoga classes, such as stretching, strengthening, deep breathing, meditation, and positive verbal affirmations; they tended not to attend classes that incorporated spirituality and chanting. The styles of yoga practiced varied greatly, which may be due to the lack of yoga style recommendations in the literature. However, a body of literature details the use of certain poses and modifications to traditional poses for arthritis.^{7,12,13,17,18} Although yoga location varied, most participated with an instructor; and interestingly, there were a large number of participants ($n=15$) who noted that they received positive verbal statements from the instructor, potentially pointing to the importance of the instructor on benefit perception.

Participant quotes provide in-depth patient perspectives on yoga practice as beneficial to relieve many RA symptoms. Primary benefits mentioned by participants included improved flexibility, strength, and energy; decreased pain, stiffness, and sleep disturbance; and improved mobility, sleep, relaxation, mood, well-being, mental focus, pride, and socialization. The participant descriptions of improvements in physical and mental health are consistent with previous findings of quantitative studies of *Iyengar* yoga for young adults with RA.^{7,8} In addition, they reinforce findings from a previous study in which the authors found that patients with RA consistently reported improvements in energy, relaxation, and mood after yoga participation.²⁵ The current study adds important new information to the discussion about community yoga practice by providing details about how and why yoga was practiced, by whom, what factors influenced its practice, what the barriers to practice were, and what benefits were received in these adults with RA who practiced yoga in the community.

Although physical activity is low in people with RA compared with persons without chronic illness, physical activities such as yoga have been shown to be the most beneficial for improvements in physical function, pain, fatigue, depression, and sleep.^{26–28} In an inflammatory disease such as RA, a patient's symptom burden often fluctuates with disease activity; patients must daily reassess their physical abilities according to their symptoms and disease activity. Study participant quotes illustrate how the dynamic exercise of yoga, which can be gentle with breathing exercises, meditation, and relaxing stretches; or can be a vigorous aerobic exercise with fast-moving strenuous poses, suited their dynamic needs as people with the fluctuating disease symptom burden of RA.

Many of the participants in this study felt pride in their ability to get to a yoga class and complete it successfully. This finding is supported by previous qualitative work, in which participating in physical activity was associated with pride, satisfaction, and improved self-efficacy in adults with RA.^{8,25,29} Self-efficacy, as described in the Social Cognitive Theory, is the confidence in one's ability to overcome barriers and undertake an action successfully.³⁰ Given this definition, it is likely that self-efficacy was improved in these participants. While the qualitative approach used here is not intended to explore causality, these hypotheses can be tested in future studies.

Three study participants ceased practicing yoga; two stopped because of the practice barrier of yoga class difficulty and one because of an increase in her symptom activity after participation. These decisions to stop practicing yoga highlight two important points: First, yoga styles and teachers vary; second, yoga may not be appropriate for every adult with RA. Yoga practice styles and duration of practice varied widely, illustrating the individual nature of the practice; one size does not fit all. These results and the previous findings regarding the varying needs of individuals for a physical activity program³¹ reinforce the subtheme "yoga meets you where you are," meaning that the practice of yoga is adaptive, versatile, and holistic to suit the needs of the practitioner. Participants in this study suggested that programs tailored specifically for people with RA would be a facilitator to yoga practice. Indeed, other studies have considered non-RA-specific classes as a barrier to performing yoga.⁸ Information

presented by study participants about barriers to yoga practice are important in order to identify ways to help adults with RA find classes that are suited to their needs. Study participant quotes suggest that if financial barriers were removed and if the classes were more arthritis-specific, more people may practice and receive benefits.

This study has some limitations. First, the sampling frame is limited by geographic area; including other areas across the United States may reveal the impact of different weather conditions, socioeconomic backgrounds, cultural influences, and available resources. Second, there is selection bias because the participants self-selected to participate in yoga and in this study. This type of bias would potentially lead to responses favoring the participation in yoga. Third, the use of a structured interview guide instead of a more unstructured interviewing approach²² may have limited participants' responses; therefore, this study cannot claim to have captured all aspects of participants' perceptions about yoga.

Despite these limitations, this study adds depth to the discussion of yoga use with the inclusion of interviews of participants with limited yoga experience and those who did not view yoga as beneficial for patients with RA. Further study into the yoga practice environment, including the influence of the teacher, may assist in guiding future yoga physical activity programs.

Conclusions

Mind-body forms of physical activity, such as yoga, can be used to assist in the self-management of physical and psychosocial symptoms due to RA. This study adds strength to the growing body of research suggesting that yoga is an acceptable complementary therapy that may be able to affect physical and psychosocial symptoms in adults with RA. This study provides insight into yoga practice in the RA community and demonstrates that characteristics of yoga participation varied widely, wherein participants found benefits from a variety of yoga styles and practice patterns. Additionally, these findings provide information for clinicians seeking to understand yoga use in their patients with RA.

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