

# Yoga and Mental Well-being: A Qualitative Exploration of the Lived Experiences of Yoga Practitioners

## Abstract

**Context:** Participation in yoga has increased dramatically amongst all demographic groups in recent decades. While studies have explored the physical and mental benefits of yoga, few have focused on the lived experiences of those practicing yoga and why they continue their involvement. **Aims:** The purpose of this study was to assess practitioners' views about the impact of yoga on mental well-being and explore how these benefits may support their continued practice. **Settings and Design:** Semi-structured interviews were conducted with 22 individuals, the majority identified as female (M age = 44.25, standard deviation = 11.80). The majority of participants were White (86.36%) and had practiced yoga for an average of 8–10 years (40.91%). **Methods:** A pragmatic qualitative approach was taken that included the adoption of a constructivist, narrative, meaning-making ontology, hermeneutic epistemology, and interpretivist axiology. Interviews were conducted on Zoom, recorded, and transcribed verbatim. **Analysis Used:** Interviews were coded independently by two team members following reflexive thematic analysis procedures. **Results:** Two major themes, structural and functional components, covered the five main subthemes that explained why yoga was beneficial for mental well-being and highlighted the self-sustaining nature of yoga practice: (1) the yoga environment, (2) personnel, (3) strengthening of mind and body during practice, (4) transfer of skills, and (5) giving back. The practitioners described how their yoga journeys supported their mental well-being and encouraged the long-term maintenance of their yoga practices. A conceptual model will be presented that incorporates the major themes and provides an explanation of why practitioners continue to practice yoga. **Conclusions:** This study provides insight into how yoga's mental well-being benefits affect adherence, and ultimately, informs our understanding of yoga as a self-sustaining practice.

**Keywords:** Adherence, mental well-being, qualitative research, yoga

## Introduction

Population-based studies suggest that individuals who engage in moderate to vigorous physical activity (PA) for 1.5–2 h/week have a 50% lower risk of premature death compared to those who are inactive.<sup>[1]</sup> In addition, a recent comprehensive analysis of randomized controlled trials, focusing on enhancing PA among adults, revealed that heightened levels of PA yielded significant improvements in symptoms of depression, anxiety, and distress across general and clinical populations.<sup>[2]</sup> Furthermore, a meta-analysis focusing on PA and the risk of depression found an inverse dose-response suggesting that PA, even at levels below public health recommendations, significantly reduced the risk of depression.<sup>[3]</sup> Despite the ongoing support for the benefits of PA, regrettably,

a considerable number of individuals continue to lead inactive lifestyles, thereby increasing their vulnerability to adverse physical and mental well-being consequences.<sup>[1]</sup> Therefore, finding ways to enhance the initiation and maintenance of PA for people of all ages is an urgent public health challenge.

Mind-body practices offer unique avenues for enhancing both mental and physical well-being and are becoming more popular forms of PA.<sup>[4,5]</sup> Mind-body practices encompass a diverse range of exercises, such as aerobic, strengthening, and balancing routines, complemented by breathwork and frequently accompanied by mindfulness practices.<sup>[6]</sup> Specifically, the National Center for Complementary and Integrative Health considers Tai Chi, meditation, and yoga as examples

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of mind-body practices.<sup>[7]</sup> Yoga originates from ancient philosophies and practices of India and Asia. A yoga practice provides a holistic wellness practice incorporating physical movement (asanas), breathwork (pranayama), and meditation techniques.<sup>[8]</sup> In the United States, yoga is often practiced as part of an exercise routine or for its therapeutic qualities. Recent studies in the United States have revealed a significant rise in yoga participation over the years. For instance, an analysis from the National Health Interview Survey across multiple years showed that yoga participation almost tripled from 5.1% in 2002 to 13.7% in 2017 with increases observed across all racial and ethnic groups.<sup>[4,9]</sup> These population and observational studies support the ongoing investigation of yoga's potential health benefits, to maximize its positive impact on physical and mental well-being for diverse populations. Interestingly, yoga interventions are equal and/or superior to exercise interventions within many different outcome measures.<sup>[10,11]</sup> Yoga has many known physical and mental well-being benefits, but the latter remain largely unexplored. The physical health benefits include increased flexibility, improved balance, increased strength, improved breathing, improved cardiorespiratory fitness, increased aerobic endurance, and mobility.<sup>[12-15]</sup> Further, yoga has been found to improve sleep<sup>[16]</sup> and the physiological stress response.<sup>[17]</sup> Moreover, yoga has been found to be beneficial for physical functioning, quality of life, and psychological health in older adults, suggesting a continued benefit of yoga across the lifespan.<sup>[18,19]</sup>

Yoga not only offers physical benefits but also demonstrates profound mental well-being benefits, as it has been shown to reduce symptoms of depression and anxiety.<sup>[20,21]</sup> Further, yoga has been explored as a potential adjunct treatment for other clinical mental well-being concerns such as posttraumatic stress disorder<sup>[22]</sup> and is growing in acceptance among mental well-being professionals.<sup>[23]</sup> These observations suggest that mental well-being may help explain how individuals initiate and sustain yoga practice. A large study of 546 participants out of the University of Southern Queensland pointed to the mind-body connection, spirituality, and stress management as some of the main motivators for individuals to maintain a yoga practice.<sup>[24]</sup> Further, the participants in the aforementioned study noted that they viewed yoga as both a physical and a mental/spiritual practice with the understanding that it could be both exercise as well as a lifestyle. Additionally, a study conducted in Germany,<sup>[25]</sup> found that over half of their participants reported a different reason for maintaining their yoga practice versus starting their yoga practice. In their study, the most common reason found for starting a yoga practice was relaxation. When asked about why they maintained their practice participants pointed to prevention and spirituality. In this case, "prevention" refers to the health benefits one can derive from yoga that help to prevent physical and mental well-being concerns.

This study illuminated yoga's appeal to beginners and seasoned practitioners and potentially pointed to a shift in motivations for practicing as individuals grew in their yoga practice. These findings of increased spirituality, mind-body connection, and personal wellness with continued practice are consistent with the philosophical view of yoga as a personal journey.<sup>[25]</sup>

While these findings are encouraging, both took place outside of the United States and, therefore, cannot be directly generalized to the American population. As yoga potentially offers a unique and accessible way for Americans to improve their physical and mental well-being, it becomes crucial to deepen our understanding of how individuals perceive and experience these advantages. It has been hypothesized that the physical and psychological benefits of yoga practice are a result of yoga's unique combination of physical movement, breathwork, relaxation, coping strategies, self-efficacy, and acceptance.<sup>[26]</sup> Gaining further insight into the benefits of yoga could continue fostering broader participation and encouraging a larger audience to engage in this form of PA in the United States.

Research on PA typically explores the physical and mental well-being of individuals who are currently inactive and unhealthy and try to change their behavior.<sup>[27]</sup> While these studies are important, exploring individuals who are active participants and how their behaviors are beneficial for their physical and mental well-being could unlock new and important information about motivation and the initiation and maintenance of yoga practice. Further, these findings could have implications for the design and implementation of future intervention studies.<sup>[28]</sup> Therefore, the purpose of this qualitative study was to explore yoga practitioners' views on how their yoga practice impacted their mental well-being and the larger effects that impact had on their lives and ongoing yoga practice.

## Methods

### Qualitative approach/research paradigm

The research paradigm adopted within this study was based on a pragmatic philosophy of knowledge.<sup>[29,30]</sup> The researchers chose this approach due to the unique nature of the research question and the need for an innovative study design given the lack of literature on individuals who are already engaging in a regular yoga practice. Further, the research question sought to explore successful engagement with yoga rather than attempting to understand barriers to adopting and/or maintaining a yoga practice. This coupled with the first author's relationship to the subject matter (the first author is a certified yoga instructor) led to the necessity of the study's innovative design. Pragmatically oriented researchers consider research questions and the problem under study to be more important than the underlying assumptions of inquiry or the method employed.<sup>[30]</sup> Likewise, pragmatists are not concerned with whether there

is a direct correspondence between knowledge generated, theory, and objective reality.<sup>[30]</sup> Knowledge construction in this sense is a way to help us cope and thrive in the world by addressing the practical needs of people.<sup>[30]</sup> As such, the need to have an open epistemological view was necessitated by our understanding of motives for yoga participation and other research previously described that details yoga's impact on practitioners. Consistent with pragmatic methodologies, the researchers based their research paradigm on the nature of the research questions. The adoption of a constructivist, narrative, meaning-making ontology, hermeneutic epistemology, and interpretivist axiology aligned with the perceived innovative needs of the present study.

### Sampling strategies

Participants were recruited through a multifaceted approach, including list-serv news releases, distribution of flyers, Facebook Ads, and leveraging word-of-mouth referrals. Participants were selected if they met the study criteria – actively participating in yoga either as a practitioner or an instructor. E-mail was used to communicate with participants and schedule interviews. There was no previous relationship with participants before the start of the research project. Recruitment took place during the fall of 2020. All interviews were conducted between August 2020 and July 2021. As such, these interviews were done during a time of lockdown and social isolation due to the ongoing COVID-19 pandemic. Potential implications and confounding factors related to the global pandemic are discussed in the limitations section of this manuscript.

### Data collection/processing

One-on-one semi-structured interviews were conducted by the first author using Zoom video conferencing technology. All interviews were transcribed by the program and checked by the members of the research team for accuracy. Each participant was interviewed once and each interview lasted 30–60 min (Mean = 43 min). Participants were asked two general questions: (1) Could you tell me a little about your personal journey within yoga? (2) How, if at all, has yoga impacted your mental well-being? Probing questions were used throughout the interviews to elicit examples that expanded upon how, when, and why certain portions of their yoga practice were perceived as useful. An example of a probing question is as follows “You shared that yoga has helped you deal with stressful situations, can you tell me more about that?” The interview guide was developed by the research team to address the research question following pragmatic principles. Multiple drafts were created and reviewed by the team before the implementation of the final interview guide. Interviews were conducted until saturation was reached. The full interview guide and probing questions can be found as supplementary material.

### Data analysis

All recorded interviews were transcribed by the Zoom program. The first author then reviewed the interview transcripts while watching and listening to the recordings and made corrections or modifications to the transcripts when needed. The interview transcripts were content analyzed following reflexive thematic analysis<sup>[31]</sup> to identify themes and common conceptual categories.<sup>[32]</sup> Reflexive thematic analysis requires researchers to first familiarize themselves with the data set, which includes an initial review of interview transcripts and initial noting of analytical observations. Coding then took place. This was accomplished by the first two authors independently conducting line-by-line coding. Verbatim quotations (e.g., single words, phrases, sentences, and paragraphs) were then pulled from the transcripts and were coded by both the first and second authors. On completion of coding, the identified codes were then brought together to uncover larger patterns of meaning and eventually create themes and if needed sequential subthemes.<sup>[31]</sup> This inductive approach focused on uncovering new data to explain the mental well-being benefits of yoga and how an individual's yoga practice evolves. Each emergent theme was discussed, vetted, and agreed on by both coders. The last author has an extensive background using qualitative methods (blinded for peer review). They served as a critical friend during the analytic process.<sup>[32]</sup> The emergent themes were grouped into agreed-upon titles with participants' quotations to support each theme. Reflexive thematic analysis was then used to develop a conceptual model to provide insight into the participant's perceived impacts of yoga on mental well-being, the elements of yoga that support mental wellness, and the maintenance of this mind-body practice. The standards for reporting qualitative research put forth by the Equator Network were followed in this investigation and are available on request.<sup>[33]</sup>

## Results and interpretations

### Participant characteristics

Twenty-two individuals practicing yoga at the time of data collection completed this study which occurred during the COVID-19 pandemic and subsequent lockdown. The average age of participants was 43.7 years (standard deviation [SD] = 11.80 years) with the youngest participant being 22 and the oldest being 67. The majority of participants identified as white ( $n = 20$ ) whereas the two other participants identified as Latina ( $n = 1$ ) and Asian American ( $n = 1$ ). In addition to these participants varying in age, years practicing yoga, and types of yoga practiced, they were also located within various regions of the United States (West Coast  $n = 2$ , Central  $n = 2$ , Midwest  $n = 6$ , and East Coast  $n = 10$ ). The most common reported income for participants was \$25,000–\$4999 ( $n = 9$ ) with the other participants reporting

the following; \$1–\$9999 ( $n = 2$ ), \$10,000–\$24,999 ( $n = 1$ ), \$25,000–\$49,999 ( $n = 2$ ), \$50,000–\$74,999 ( $n = 2$ ), \$75,000–\$99,999 ( $n = 5$ ), \$100,000 and above ( $n = 1$ ); two participants endorsed that they preferred not to answer. Participants also reported their educational background through the highest degree attained; Bachelor’s degree ( $n = 7$ ), Master’s degree ( $n = 11$ ), and Doctoral degree ( $n = 4$ ). Participants had yoga experience that ranged from 3 to 30 years ( $M = 13$  years,  $SD = 7.29$ ) and reported practicing a wide range, and often multiple styles, of yoga (i.e., Hatha Yoga 27%, Vinyasa Yoga 68%, Yin Yoga 36%, Power Yoga 40%, Iyengar Yoga 18%, Restorative Yoga 54%, pre/postnatal Yoga 9%, Kids Yoga 18%, Acro Yoga 4%, Aerial Yoga 18%, Trauma-informed Yoga 9%, Ashtanga Yoga 9%, Anusara Yoga 9%, Ashaya Yoga 9%, and Rasa Yoga 9%) with an average weekly practice time of 4.95 h ( $SD = 3.12$ ). Of the 22 participants, 16 were also certified yoga instructors. When asked about additional mind-body practices, most of the participants shared that they also practiced meditation (86.36%) with one individual sharing that they also practiced Reiki (9.00%).

### Thematic results

Two major themes, structural and functional components, were identified that contained four subthemes generated from participant data. These two themes separated the five main subthemes which explained how participants reported yoga as beneficial for their mental well-being [Figure 1]. Specifically, participants discussed (1) the yoga environment, (2)

personnel, (3) strengthening of mind and body during practice, (4) transfer of skills, and (5) giving back. Importantly, the analysis revealed an interconnected nature of the major themes, main subthemes, and minor subthemes. The interconnected nature of the themes has important implications for understanding how participants viewed yoga as a beneficial practice for their mental well-being.

### Structural components

The major theme of structural components covers the participant-generated themes that build the physical and mental environment associated with yoga. This theme builds the foundation of the yoga experience touching on the where (i.e., yoga studio) and who (i.e., yoga instructor or other class participants) that accompanies a yoga practice. Thus, this major theme is broken down into two main subthemes which are the yoga environment and personnel. It is worth noting that an interconnection between these main subthemes and minor subthemes was found by researchers and addressed further in the analysis.

### The yoga environment

The participants shared that the yoga environment was a key part of yoga’s benefit for their mental well-being. This theme encompassed the minor subthemes of safe space and social environment both of which interact to create the unique yoga environment. The yoga environment also interacts with and is influenced by the personnel that make up the social environment.

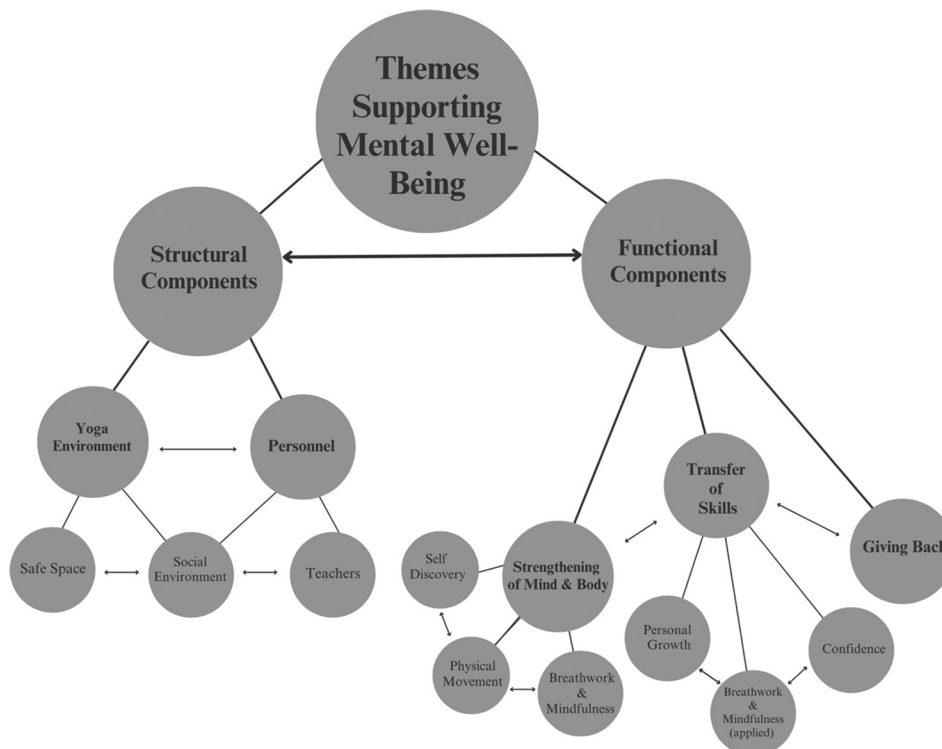


Figure 1: Thematic map (coding tree) of major themes, main subthemes, and minor subthemes

## Personnel

This main subtheme houses the minor subtheme of teachers – which directly speaks to the importance of the yoga teacher within the lived experience of our participants. While the main subtheme of personnel stands alone, we discovered an interaction between this theme and that of the yoga environment as each of these pieces acted together to create the structural foundation of our participant's yoga practices. It is also worth noting that the minor subthemes of teachers, social environment, and safe space were also intertwined in our participant's experiences.

## Functional components

The major theme of functional components covers the participant-generated themes that build out the application of the yoga practice. This theme builds the foundation of the active yoga experience touching on what is occurring during the practice itself (i.e., asanas, pranayama, and meditation) and what is occurring after (i.e., application of yoga philosophy and skills). Thus, this major theme is broken down into three main subthemes which are strengthening of the mind and body, transfer of skills, and giving back. The interconnection between these main subthemes and minor subthemes is addressed further in the analysis.

### Strengthening of the mind and body

The ability to strengthen both their mind and body was a key part of yoga's benefit to their mental well-being for participants in this study. Individuals noted that yoga, unlike some other forms of exercise, strengthens the body while also strengthening the mind through its distinctive integration of pranayama (breathwork) and mindful awareness. This main subtheme is broken up into three minor subthemes to help create further clarification. These subthemes are breathwork and mindfulness, physical movement, and self-discovery. These minor subthemes both acted on and influenced one another to fully develop the understanding of our participant's experience when they are actively participating in their yoga practice. Thus, this main subtheme encompasses the active physical, mental, and learning processes that our participants experience on their yoga mats.

### Transferable skills

The second main subtheme that emerged from the analysis was the importance of transferable skills that an individual could take away from their yoga practice and apply to other areas of their lives. This main subtheme is both sustained by and sustains the other main subtheme of strengthening the mind and body as participants shared that they both applied what they learned from their yoga practice in their day-to-day lives and that this ability to apply yoga tools and philosophies kept them coming back to their mat. Consequently, they learned to regulate their emotions,

improve their relationships, and maintain a healthier approach to life. Transferrable skills included three minor subthemes: personal growth, confidence, and the use of breath and mindfulness (applied).

### Giving back

The final main subtheme was that of giving back. The ability and willingness to take the personal growth and the skills gained, such as breathwork and mindfulness, from their yoga practice out to share with the world created a distinctive phenomenon within this type of mind-body practice that compelled some participants to pay it forward. Full thematic results are represented in Table 1.

### Interconnection of themes

Although not linked explicitly to the purpose of this study, the interconnectedness of themes and subthemes was an important inductive finding. That is, analysis and interpretation led the research team to note that while each theme and subtheme was distinctly substantiated, they were also substantially interconnected. The following quote is provided as an exemplar of the important contribution each major theme, main subtheme, and minor subtheme had on the participant's mental well-being and how each connects.

The mental well-being aspects, the fact that yoga can improve mental well-being, that's really critical to me as a potential gift that yoga can give to people is that gift of self-acceptance. Right, that ... meeting you where you are, coming to know who you are more effectively through training of the breath, through the discipline of the mind, through making your body your ally and not your enemy. So by yoga (s) emphasizes staying present in your body, being compassionate with yourself, in your body, (and) teaching regulation of the breath while being in the body. You know these things help to regulate and focus your attention, and by learning how to regulate and focus your attention, you can better handle misfortunes that come down your path.

Participants described both structural and functional components of their yoga practice and noted how each of these themes built on each other and allowed for further healing and growth. Specifically, the structural components of yoga (yoga environment and personnel) provided the foundation on which participants could explore and grow. From the safe and stable foundation of the structural components, participants were able to fully engage in the functional components of yoga. Our participants were able to safely push their mind and body to discover new abilities and truths about themselves. Likewise, it was the combination of the environment that yoga created as well as the practices' ability to strengthen both the mind and the body that allowed for things such as awareness, mindfulness, and empowerment to blossom in our participants. These and other such skills that were learned during our participant's yoga practice, were then taken

**Table 1: Themes, subthemes, and supporting quotes**

Themes	Subthemes	Brief description	Supporting quote
<b>Structural components</b>			
Yoga environment	Safe space	Many individuals shared that they viewed their yoga practice as “a safe space” in both the physical environment and the metaphorical space	“The mental benefits come from this idea that you’re in a controlled environment doing physical things with guidance so that you can then explore how you approach these obstacles within the physical asanas”
Personnel	Teachers	A quintessential part of the yoga environment is the yoga instructor. Participants shared that their yoga instructors played a role in both their yoga practice and their ultimate journey to greater mental well-being	“Finding a yoga teacher that you really like and respect is one of the most helpful things when having a yoga practice that is beneficial for your mental well-being. I had yoga teachers, that really opened my eyes to that and set an example of like, what anyone is doing on your mat next to you does not matter, like this is your practice it’s all about you. And the way that they taught and just led the room and created a space for people to just like totally let go and not worry”
	Social environment	The minor subtheme of the social environment was unique as it was notably both created by and an influencer of both the minor subthemes of teachers and safe space. Many participants shared that the social environment of their yoga practices made them want to keep coming back	“Another one of the positive attributes I think of this is the group that I’m in...I derive some social benefits from it for sure” and “. it’s (yoga) also fun there’s a social aspect because you get to know the other people that usually come back to class and that’s of course a fringe benefit”
<b>Functional components</b>			
Strengthening of the mind and body	Breathwork and mindfulness	Participants shared that when practicing yoga, they actively gained a greater awareness and understanding of their breath. Further, the awareness and attention dedicated to their breath reflected a state of mindfulness. In addition to this increased awareness, participants also shared that they learned how to control and manipulate their breath in times of work, effort, or stress	“I think it (yoga) helps you learn how to breathe better right, and I think that’s going to be the basis of any kind of, especially with anxiety. That’s going to be like one of the main things to help you center yourself and refocus” “I think it’ll speak to everybody’s individual level of resilience if you’re able to offer them a little bit of breathing, a little bit of movement, little bit of mindfulness”
	Physical movement	The discussion around physical movement was also a very prominent part of the main subtheme of strengthening the mind and body. Many individuals spoke to the importance of the physical aspect of yoga (asanas) and how it often acted as the gateway to other benefits such as mindfulness and confidence	“To slow down the mind and just to be present for the sensations in my body, I’m not trying to force them to go away...We just sit, when we sit in that pose we feel it, and in order to heal, first we must feel.” “Yoga is about the body training the mind. You know, and really seeing the fluctuations of your mind, so you can see your true nature, which is beyond the mind”
	Self-discovery	Many participants shared that through the practice of yoga, they learned much about themselves, increased their overall awareness, pushed past old boundaries, and became healthier humans overall. Participants shared this sentiment both from personal experience and from what they had observed as instructors	“It (yoga) shows the students that they’re capable of things that maybe they didn’t think they were capable of...maybe we were stronger mentally, physically, and emotionally than we thought we were.” “It (yoga) teaches you to gently move into your body when you’re ready and find out what you can discover there, no matter what it is, once you see it, know it’s there, then you can start to address it. It’s unique in that way, there’s nothing else that does that, and you are empowered to do it yourself, it’s not somebody else doing it for you”
Transferable skills	Personal growth	Perhaps one of the more impactful minor subthemes that emerged under transferable lessons was that of personal growth. Many participants shared that their practice of yoga had greatly shifted how they approached life and how they were as individuals. Yoga helped participants shift their perspective and learn to be more patient, handle stress, and regulate their mood	“Yoga is beneficial for mental well-being because... how you handle things on your mat and how you approach things on your mat is often very similar to how you handle things and approach things off of your mat.” “(Yoga) Was another way to release stress and that gave me insight into my imbalances, but also into my habits, my mental habits, my physical habits, my emotional habits, and therefore gave me a lot. It gave me a way I could regulate my energy, and my mood, and clear my mind”

*Contd...*

Table 1: Contd...

Themes	Subthemes	Brief description	Supporting quote
		<b>Functional components</b>	
	Confidence	This minor subtheme emerged within the exploration of transferable skills as participants described that the confidence gained on their yoga mat and from their self-discoveries, translated to their confidence in the outside world	"I like the physical confidence, yeah well because balance, because you know safety as a senior (laughs), a lot has to do with balance and so yeah being able to feel like you have it is huge"
	Breath and mindfulness (applied)	When exploring transferable skills our participants discussed in great detail how they had learned to apply the breath work and mindfulness practices learned in their yoga practice within their daily lives. More specifically our participants shared that they had begun taking their new knowledge of breath work and using it during challenging moments	"Taking a deep breath, especially in the time of panic or high anxiety is it can be extremely powerful and just bringing someone back into their body back into the now." "I did my breathing there and I didn't have any trouble at all, where I was, you know the previous MRIs that I've had I've really struggled to stay calm, and I got in and out with this one and I attributed it to my breathing"
Giving back		This theme emerged amongst many participants and, unlike other themes, is not broken down into minor subthemes. This theme is also unique, as it likely emerged due to the nature of the sample, (i.e., individuals who both practice and instruct yoga). That is, many individuals were brought to the yoga practice due to their own personal struggles at the time and found yoga to be a supportive and healing place. Consequently, many participants expressed that after experiencing the numerous benefits of yoga for themselves, they felt compelled to share these benefits with others	"I was going through a lot, there was a lot of stress in my life for the time just dealing with a lot and it (yoga) just became a huge outlet for me... and then, I realized I could really see myself teaching this and giving what yoga gave to me to other people." "I am just so passionate about it as a path for healing and so that's kind of my mission now as a yoga teacher to help people down their own path toward healing"

and applied to many aspects of their lives off of the mat. Notably, these themes do not operate unilaterally; instead, they constantly interweave, dynamically influencing one another. The culmination of these interconnected elements can provide a sense of purpose or a goal to continue to work towards. This purpose or goal continues to guide practitioners towards an altruistic lifestyle, particularly through the act of giving back. These experienced themes continued to encourage our participants to keep coming back to both maintain their new skills and to continue to grow and learn. Participants shared their high regard for the yoga space and just how important it was for them to continue coming back to it as a way to take care of themselves and continue to grow "Knowing that that space (yoga) is always there anytime I need it it's just huge." The dynamic and interconnected themes derived from our participants suggest a model of continued maintenance of their yoga practice [Figure 2].

This figure provides insight into how the unique elements of yoga impact practitioner adherence. The combined influence of mental well-being benefits, the yoga environment, transferable lessons, the strengthening of the mind and body, and the desire to give back creates a strong motivational force for individuals to adhere to their yoga practice over time. In other words, yoga becomes a self-sustaining practice. This adherence is driven by the recognition of the profound positive impact yoga has on

overall well-being both on an individual level and in terms of personal growth. Further, this model has implications for understanding the self-sustaining mechanisms of maintaining this mind-body practice. This unexpected finding encourages further research.

## Discussion

This study pointed to various ways in which current yoga practitioners and instructors perceived yoga to impact their mental well-being, and how the perceived healing nature of yoga influenced their ongoing yoga practice. It is worth noting that these interviews were conducted during the COVID-19 pandemic. This could have impacted the response of our participants due to the unprecedented nature of that time. However, during the interviews, only one participant directly spoke about COVID-19 when they discussed the importance of the social nature of a yoga class.

Our findings discussed in detail the importance of both the structural and functional components of our participant's yoga practice and how each major theme, main subthemes, and minor subthemes interacted. These findings suggest a cyclical process in which the physical and mental well-being benefits derived from yoga practice were applied to participants' daily lives and influenced the continued maintenance of their yoga practice. As such, yoga was presented as a self-sustaining practice. In Park *et al.*'s,

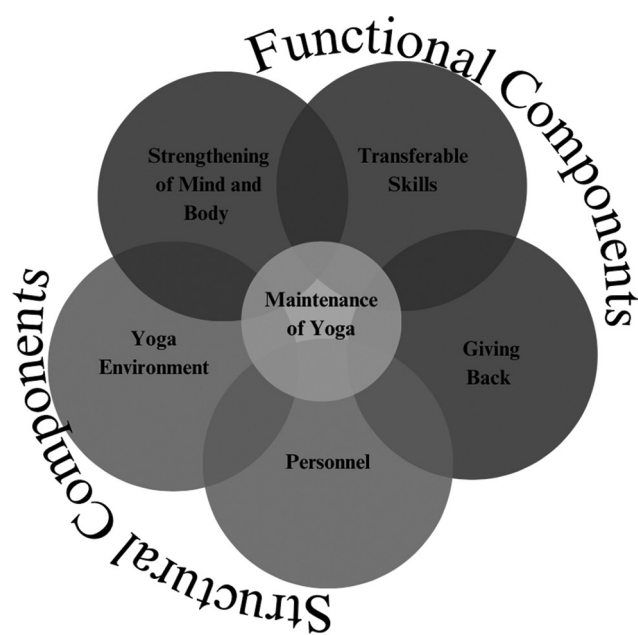


Figure 2: Interconnection of themes' implications for maintenance of yoga

in 2019, study of German yoga practitioners, participants began and maintained the practice for similar reasons as described in this study (i.e., relaxation, prevention, and continued focus on spirituality).<sup>[25]</sup> Alternatively, Patel *et al.* found that yoga improved self-rated health status, aerobic fitness, and strength in older adults.<sup>[14]</sup> While the current study did not specifically focus on older adults, some participants who were similar in age as the sample in Patel *et al.*, spoke about the benefits of physical movement they had gained from yoga and how those benefits affected their confidence and overall mental well-being.<sup>[14]</sup> In comparison to the findings presented in the two previous studies, the current study's findings tended to focus on the previously established benefits to a lesser extent and extended the list of benefits to include giving back, safety, and growth as significant factors in their ongoing practice.

Further, the findings of the current study supported findings from Bonura and Tenenbaum, 2014, who found yoga improved anger, anxiety, well-being, depression, and self-efficacy for daily living.<sup>[19]</sup> The participants in the current study shared how yoga was a place that helped them manage stress and that many of the "tools" that they learned in yoga were helpful in their daily lives for managing mood, focus, and everyday stressors. There was also the added benefit that yoga is very adaptive, and the participants believed they would likely be able to adapt and modify their yoga practice to fit their physical and psychological needs as they age. In combination, findings from the current and previous studies indicate that yoga contains both structural foundations and functional benefits. These components interact to allow individuals to experience, and continue experiencing, a combination of physical movement, breathwork, relaxation, coping

strategies, self-efficacy, growth, gratitude, and acceptance within a single mind-body practice throughout their lifetime.<sup>[26]</sup>

Another important implication from our findings was that each theme seemed to suggest support for continued participation in regular yoga practice. This finding suggests that yoga could be a self-sustaining practice throughout a participant's lifetime, thus making it an important modality of physical movement. Although the participants in the current study ranged in age, the older participants echoed these ideas and thus aligned with the findings of recent literature that more specifically explored yoga in older adults.<sup>[18,19]</sup> Thus, yoga offers a modality for continued PA throughout the lifespan due to its uniquely adaptive and modifiable approaches. Further, yoga does not require equipment or a specific location, it is a practice that can be done at any time in almost any location. More importantly, what the current study and other recent studies have pointed to is that, due to the self-sustaining nature of yoga, a door can be opened to self-sustained wellness. This self-sustaining nature allows yoga to remain a popular form of PA even in events that would otherwise limit activity such as the COVID-19 pandemic. Further, the distinct theme of giving back could be the missing key in fostering continued maintenance of alternative forms of PA, prompting further investigation into how this experience of giving back can be integrated into yoga instruction or other physical pursuits. It might be possible to design interventions that tap into or nurture opportunities for individuals to give back in various clinical, educational, or community settings. By focusing on giving back to others, individuals might be motivated to encourage others to initiate and maintain yoga or pursue teaching certifications and advanced training. In short, the desire to give back could be a powerful motivator for individuals to stay engaged with a physical practice such as yoga, however, further research is necessary to explore the potential underlying motivational factors.

The theme of giving back builds upon previous findings (e.g., relaxation for initiation of a yoga practice; health prevention, and mind-body connection as reasons to maintain a yoga practice) and could be a unique characteristic of continued yoga practice and intervention studies.<sup>[24,25]</sup> Finally, yoga has continued to gain respect from the medical field and has grown to include more clinically focused formats such as Yoga Therapy which blends the traditional components of yoga into the Western medical system.<sup>[34]</sup> Similar to previous studies, the findings of this study reinforce the multitude of yoga benefits for overall health<sup>[12-18]</sup> and provide an encouraging direction for the continued integration of yoga within our healthcare system.<sup>[20-23]</sup>

While this study highlighted the ways in which yoga can enhance mental well-being and its potential advantages, it is not without limitations. As discussed previously, our sample



was mainly cis-female, White, and the majority of whom were highly educated, which is representative of people who practice yoga in the US.<sup>[4,9]</sup> However, the generalizability of these findings should be explored in a more diverse sample as yoga participation continues to increase in individuals with other gender identities, racial, and ethnic backgrounds.<sup>[9]</sup> Another potential limitation of this study is the fact that yoga is a very broad term that encompasses many different forms of physical practice. In addition to the physical practice of yoga, there is also the inclusion of mindfulness, meditation, and breathing practices that are present in many traditional forms of yoga.<sup>[35]</sup> As such it can be challenging to standardize the “type” of yoga that is being explored in a study such as this.

Future research should seek to expand the demographics of yoga practitioners explored and address similar questions posed here with clinical populations. Moreover, additional studies exploring the mechanisms of maintenance of yoga and other mind-body practices are needed to expand upon these findings. For example, exploring the differences between individuals who maintained a consistent yoga practice with those who dropped out could inform best practices to encourage continued participation in yoga and other mind-body practices. Finally, investigations into the effectiveness of interventions designed to maximize the benefits of yoga practice, as described by these participants and those in similar studies, may be useful in extending the reach, accessibility, use, and sustainability of yoga as a viable and important mind-body practice for practitioners across the lifespan.

## Conclusions

This study provided further evidence of the positive impact of yoga practice on personal mental well-being while elucidating reasons for ongoing yoga practice. Further, this study encourages continued exploration of the application and integration of yoga into the health-care system. Findings advance the field of study by uncovering the lived benefits and experiences of regular yoga practice and thus advance physical and mental well-being care fields by discussing how yoga could become a more integrated modality to sustained health.

## Ethical statement

This study was approved by the International Review Board at West Virginia University (protocol number: 2102241613).

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## Conflicts of interest

There are no conflicts of interest.

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