Research

Perceived Benefits of Kripalu Yoga Classes in Diverse and Underserved Populations

Angela M. Wilson, MA,¹ Kate Marchesiello, E-RYT,¹
Sat Bir S. Khalsa, PhD¹,²

¹. Kripalu Center for Yoga and Health, Lennox, MA
². Division of Sleep Medicine, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School

Abstract:
Objective: To determine if diverse and underserved populations report benefit from Yoga practices and report an intention to continue with Yoga, meditation, or breathing practices.

Design: This was a retrospective study using archival data from exit questionnaires acquired at the end of Yoga programs serving diverse populations. Qualitative data was also collected from the Yoga teachers.

Setting: Free Kripalu Yoga classes offered to diverse and underserved/underprivileged populations (e.g., minority groups, the elderly, gay populations), as part of the Teaching for Diversity (TFD) program through the Kripalu Center for Yoga and Health (KCYH).

Participants: 220 participants, ranging in age from adolescence through old age.

Measures: Nine questions about the perceived benefits and usefulness of Yoga practices in everyday life were administered to participants on the last day of class. Qualitative data was collected from teachers regarding their experience teaching underserved populations.

Results: Of the 220 respondents, 89% reported that the Yoga class left them with a feeling of overall wellness, and 83% found the practices helpful. 98% reported that they would recommend this Yoga class to others. Participants found the individual Yoga components of the breathing, Yoga postures, and meditation practices effective and said they were useful in their daily life. Pairwise t-test comparisons of average scores between these three practices indicated that participants were more likely to rate breathing useful as compared to either the postures or meditation (p < 0.01).

Conclusion: Diverse and underserved populations report benefit from and interest in Yoga, meditation, and breathing practices.

Keywords: Yoga, meditation, prānāyāma, diversity, Kripalu

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Background and Significance

Research on the benefits of Yoga practice has grown substantially over the past several decades, documenting the positive effects of Yoga practice on coping with stress, cognitive abilities, and mood.\(^6\)\(^{-}\)\(^8\) More recently, Yoga practice has been used as a therapeutic intervention for a variety of disorders, including psychiatric conditions such as depression and anxiety, breathing disorders such as asthma, endocrine disorders such as diabetes, and a variety of musculoskeletal and neurological conditions.\(^6\)\(^{-}\)\(^8\)

Considering these positive outcomes, it is not surprising that Yoga practice has increased in popularity in recent years. According to a study published in 2004,\(^9\) approximately 15 million people in the U.S. have tried Yoga in their lifetime, and 7.4 million are current Yoga practitioners. These Yoga practitioners tended to be well-educated, urban-dwelling women between the ages of 34 and 53. Of those who had used Yoga in the past 12 months, 63.7% reported using Yoga for wellness, 49.7% for health conditions, and 21.0% specifically for back or neck pain. A more recent study published in 2007 showed that the majority of Yoga practitioners were white women who had annual incomes of at least $35,000.\(^10\) Although it is clear that Yoga practice is gaining in popularity and therapeutic use, the demographics of this group consist predominantly of white, highly educated adult females.

There are a few plausible explanations for the disparity of Yoga use across income levels, minorities, ages, and genders. It is possible that diverse groups are less interested in complementary and alternative medicine (CAM), including Yoga. However, in a survey on CAM usage, nearly 68.3% of African Americans and 55.0% of Latinos had used some form of alternative medicine (including prayer) in the past 12 months.\(^11\) These results suggest that minority populations are interested in some types of CAM, so the question remains as to why not Yoga? It is possible that culture plays an important role in the initiation of Yoga use and other forms of physical activity. For example, Marquez and McAuley found that Latina women’s physical activity depended on their degree of acculturation, suggesting that initiation of some physical activities is at least partly mediated by cultural influences.\(^12\)

The disparity of the use of Yoga in minority groups (specifically low-income populations) could also reflect the costs involved in participating in this practice. As Barnes and colleagues report, one of the most practiced CAM modalities is prayer, a practice that is financially accessible to all income levels.\(^11\) Given that Yoga practice can be an expensive fee-based service, it might be challenging for low-income populations to use this health modality. Geographical access to Yoga classes may also be problematic for disadvantaged populations.

For the purposes of this study, we use the term “diverse” to refer to both underserved populations (e.g., ethnic minorities and low-income populations) and vulnerable populations (e.g., the elderly and children). Although there have been hundreds of clinical and basic research studies on the benefits of Yoga and meditation, only a handful have been conducted with diverse and minority populations. It has been documented that minority and low-income populations are at risk for stress-related disorders such as cardiovascular disease,\(^13\) and a Yoga practice could play an important role in reducing this risk.

The few studies that have been conducted on Yoga and meditation practices among diverse groups have produced encouraging results. Yoga practice has been shown to reduce hostility scores for racially diverse women,\(^14\) and meditation practice reduced absentee and suspension rates in African American youth.\(^15\) Yogic relaxation training and Yogic breathing improved quality of sleep and self-concept, increased well-being, and reduced stress in a group of female minorities attending college in India.\(^16\) A study on ABC Relaxation, a technique that includes breathing and Yoga stretching, showed reductions in depression and increases in relaxation states in a group of elderly Puerto Ricans.\(^17\) A study on a 12-week Yoga class for urban breast cancer patients, of whom 42% were African American and 31% were Hispanic, found increases in quality of life, emotional well-being, and social well-being.\(^18\) Blumenthal and colleagues found significant increases in reported quality of life for elders who completed a Yoga program.\(^19\) Reductions in systolic and diastolic blood pressure have been found in youths who engaged in meditation practice, as well as elders who engaged in Yoga practice.\(^20\)\(^{-}\)\(^24\)

However, not all findings were equally encouraging. One study examined the effects of a ten-week Yoga program, including a home practice, on blood pressure and psychological well-being in African American and Caucasian elders. Compared to African American elders, Caucasian elders were more likely to complete the home practice and experience significant improvements in blood pressure and psychological well-being.\(^21\) This difference calls into question whether or not African American elders are interested in Yoga, and how they can be encouraged to practice at home.

The current study is aimed at gaining a preliminary understanding of whether or not diverse groups find Yoga and meditation interventions beneficial and useful in their daily
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life. To address this question, we surveyed participants and teachers in the Teaching for Diversity (TFD) program. TFD was started in 2001 by the Kripalu Center for Yoga and Health (KCYH) to extend Yoga practices and principles to underserved populations. TFD is sponsored by KCYH and is funded by KCYH private donors and organizations. Each year KCYH financially supports more than 25 teachers who wish to offer Yoga classes to underserved populations all over the country. Underserved organizational sites include community centers for the elderly, women, gay populations, and youth. Organizational sites are selected based on need and nature of the organization.

Methods

Sample

Teachers for the TFD program were required to locate an established organization that serves diverse and underserved populations and set up classes for a minimum of eight weeks. Teachers were also required to be members of the Kripalu Yoga Teachers Association or the International Association of Black Yoga Teachers. Once approved, they were required to provide written evaluations from the host organization and students, as well as a written account of their own experience.

Yoga classes were offered by teachers at organizational sites one day a week for 8-21 weeks. All Yoga classes were taught in the Kripalu Yoga tradition, which emphasizes conscious awareness, deep relaxation, meditation, breathing exercises, and Yoga postures. Most classes were hour-long and included all aspects of the Kripalu Yoga tradition: asana practice (both static and flowing), prânâyâma (breathing) techniques, and meditation. In addition, basic Yogic psychology, philosophy, and lifestyle were introduced. Though teachers varied in their combination of these practices, all components were included in each class and program. The number of participants in each class varied, depending on the organizational site, interest in the class, and space availability. In most classes, attendance was not mandatory, and additional participants were almost always allowed to participate as the program progressed. Attendance was not monitored by the teachers. Programs were held once at each site.

Measures

Archival data was collected from the 2005 TFD programs. Both students and teachers completed exit questionnaires at the end of each program. The student exit questionnaire consisted of nine questions about their experience in the program, eight on a 1-4 Likert Scale (answers ranging from “not at all” to “a great deal”), and the last in yes/no format (see Table 1 for items). Students responded anonymously. The exit questionnaire was administered in pencil and paper format by the Yoga teachers on the last day of the class. Only students who were in class on the last day of class received the exit questionnaire. No identifying information was written on the questionnaires, which were returned to the Kripalu Center and kept with program documentation. In addition, the TFD program collected qualitative information from teachers on their experiences. The teachers mailed their reports to the Kripalu Center within a few weeks following completion of the program.

Table 1. Items of participant exit questionnaire.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>The activities in the Yoga class left me with an overall feeling of wellness.</td>
</tr>
<tr>
<td>2.</td>
<td>The breathing exercises I learned to calm me were effective.</td>
</tr>
<tr>
<td>3.</td>
<td>I will use these breathing exercises to help me in my daily life.</td>
</tr>
<tr>
<td>4.</td>
<td>The Yoga postures and stretching exercises I learned reduced the stiffness in my body.</td>
</tr>
<tr>
<td>5.</td>
<td>I will use these Yoga postures and stretching exercises in my daily life.</td>
</tr>
<tr>
<td>6.</td>
<td>The meditation techniques I learned calmed my mind.</td>
</tr>
<tr>
<td>7.</td>
<td>I will use these meditation techniques in my daily life.</td>
</tr>
<tr>
<td>8.</td>
<td>In general what I have learned in this class will be helpful in my everyday life.</td>
</tr>
<tr>
<td>9.</td>
<td>I would recommend this Yoga class to others.</td>
</tr>
</tbody>
</table>

Descriptive analysis on questionnaire results used calculated percentages of responses in each category and average scores with standard deviations (S.D.) were calculated by assigning numerical values to the answers from “Not at all” = 1 to “A great deal” = 4. Comparisons were made using the paired t-test.

Results

A total of 220 students from 26 sites completed the questionnaires. The sites included: 6 centers for youths ages 13-18 (including 1 for gay youth), 4 correctional facilities, 3 women’s domestic violence shelters, 3 substance treatment centers, 2 senior centers (ages 70+), 2 psychiatric centers, 1 cancer treatment center, 1 AIDS treatment center, 1 vocational center, 1 immigration assistance center, and 1 physi-
cal disabilities center. Of these centers, 11 were for women, 3 for female teens, and 1 for women and children. Though specific demographic information was not collected, teacher reports revealed that many sites had a large number of African American and Latino members. All sites served either low-income and disadvantaged individuals (e.g., ethnic minorities) or vulnerable populations (e.g., elders and youth), as per the mandate of the TFD program at KCYH. All teachers completed the qualitative questionnaire. The number of participants in each individual Yoga class varied from 6 to approximately 25. No information was available on total attendance of the classes.

Figure 1 shows the mean survey scores of the students for each item, and Figure 2 shows the percentage breakdown of responses for two particularly important items. 57% of participants reported that they felt a great deal of overall wellness from the Yoga class, compared to only 1% who reported Yoga did not leave them with a sense of wellness. 44% and 39% reported that what they learned in Yoga class would be a “great deal helpful” and “moderately helpful,” respectively, in their everyday life, compared to 3% who reported that they did not find what they learned in class to be helpful. Of the 219 respondents who responded to item 9, “I would recommend this Yoga class to others,” the vast majority (98%) reported that they would recommend the class to others, compared to 2% who reported they would not recommend the class.

The majority of participants found the Yoga postures and stretching exercises helped to reduce body stiffness a great deal (48%) or moderately (37%). Almost half of participants (49%) reported that the meditation techniques helped calm their mind a great deal, compared to 2% who reported that meditation did not help them at all. Finally, 55% of participants reported that the breathing exercises were effective to a “great deal” in calming the mind, compared to 2% who reported they were not at all effective.

Were respondents likely to use what they learned outside of the classroom? Over half (58%) of respondents reported that they were moderately likely to use the Yoga postures in their daily life, compared to 6% who reported they would not use the postures at all. 59% responded that they were moderately likely to use the meditation techniques in their daily life, compared to 7% who reported they would use them a great deal, and 6% who reported they would not use them at all. Interestingly, 24% of participants reported that they were a great deal likely to use the breathing techniques in their daily life, compared to only 10% who reported being very likely to use the postures, and 7% for meditation (see Figure 3). As measured by paired t-tests, the averaged response scores for likelihood of using breathing (3.24 ± 0.87 S.D.) were significantly greater than those for meditation (3.07 ± 0.92; p < 0.001) and Yoga postures (3.10 ± 0.93; p = 0.005). No other pairwise comparisons were significantly different.

The open-ended comments from teacher questionnaires were analyzed qualitatively. A total of 26 teachers completed questionnaires about their experience of working with their students. The following comments were most frequently mentioned by Yoga teachers: 13 reported that they would teach this population again, 9 reported that teaching diverse groups required flexibility and patience, 7
teachers felt that teaching a population that might not otherwise have access to Yoga was very rewarding. 7 reported that students appeared more calm and relaxed after class, 6 reported that maintaining attendance was challenging, 6 reported that it was a challenge to teach such a variety of different levels in one class, and 6 reported that the Yoga classes fostered closer relationships among students.

Because teachers were not asked specific questions about these topics, it is important not to assume that teachers who did not make the above statements would disagree with them. Rather, the statements reflect what teachers found most important to mention in describing their experiences.

Discussion

The results of this report suggest that in general, diverse and underserved populations find benefit in Yoga practice and perceive it as useful. Participants reported that Yoga, meditation, and breathing techniques created a sense of overall well-being, helped to reduce body stiffness, and had calming effects on the mind. Almost all (98%) would recommend Yoga practices to others. Of all the practices taught, the breathing exercises were significantly more likely to be used in daily life than Yoga postures and meditation techniques.

This last finding was unexpected but is consistent with results of a recent survey study by Barnes and colleagues, who reported that 11.6% of the U.S. population had used deep breathing exercises in the past 12 months, compared to only 7.6% who had tried meditation, and 5.1% who had tried Yoga. Why breathing exercises are used more frequently than other practices, what specific techniques are practiced, and what particular benefits people gain from them are questions that deserve further investigation.

Half of the teachers reported that the experience of teaching diverse populations was rewarding and that they would teach a similar group again, and no teacher reported major disappointments or dissatisfaction with the experience. This may encourage other teachers to reach out to underserved and diverse populations. Several teachers highlighted specific challenges of teaching diverse populations, including creating classes that suit students of different physical ability, and maintaining order and interest in the classroom. It may be useful for teachers who wish to work with underserved and diverse populations to consider these challenges in advance.

As a retrospective study of archival exit survey data, this analysis has several limitations. Participants were not required to attend every class, and attendance was not recorded. Therefore, it is not possible to determine how many classes each person had completed. Furthermore, students completing the survey at the last class may not be representative of the entire program population, since efforts were not made to acquire surveys from students who had withdrawn from the program. This creates a bias favoring positive responses, because data from participants with more negative impressions may not have been included. In addition, even though the responses were anonymous, students completed questionnaires in front of their Yoga teacher. It is possible that the students might have wanted to portray a positive outcome to their instructor, or may have subtly felt pressured to report a more positive outcome of their experience.

Figure 2. Scores of questions 1 and 8 from the participant exit questionnaires.
Future studies would benefit from a prospective study in which more thorough information on demographics, previous experience with mind-body practices, and class attendance could be taken. In addition, using standardized outcome measures might better reveal the benefits of Yoga practice. Finally, the question of whether or not certain diverse populations are more interested in some Yoga practices than others, and whether or not different groups would benefit from different practices, is worthy of further exploration in future studies.

The use of Yoga practice for diverse groups appears encouraging. This study suggests that given access to Yoga practices, diverse populations benefit from these practices in a classroom setting, and that they anticipate using them in everyday life. Further investigation into how Yoga, meditation, and breathing exercises would benefit diverse populations is needed.

References

11. Barnes PM, Powell-Griner E, McFann K, Nahin R. Complementary

Direct correspondence to Angela M. Wilson at Kripalu Center for Yoga and Health, PO Box 309, Stockbridge, MA, 01262. Tel: 413-448-3274. Email: angelaw@kripalu.org.