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# Being on the Mat: A Process Evaluation of Trauma-Informed Yoga for Women with Substance Use Disorders

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*Yoga practice is associated with positive health outcomes, including benefits related to managing substance use disorders and trauma symptomology. However, low-income vulnerable communities have limited access to yoga. This process evaluation of a trauma-informed yoga program for women with substance use disorders demonstrates the feasibility and utility of using non-certified yoga instructors to offer a basic yoga in community-based agencies. Participants describe outcomes related to relaxation, mindfulness, and movement that are well-aligned with their recovery needs. Study findings suggest the utilization of instructors with minimal training has the potential to expand research about and access to yoga among marginalized communities.*

*Key words: Yoga, women, substance use, qualitative, evaluation*

In the United States, over 20 million people, nearly 9% of the adult population, practice yoga, an exercise of movement and breath that has been associated with positive health outcomes (Posadzki, Choi, Lee, & Ernst, 2014; Yoga Journal, 2012). However, this population of yogis does not reflect the diversity of the nation: U.S. yoga practitioners are predominately female (76%), White (84%), college-educated (50%), and have upper-middle class incomes or above (48%) (Birdee et al., 2008). In order to diversify and expand the population of individuals who practice yoga in the U.S., there are a growing number of non-profit organizations that offer free or reduced price yoga programs to underrepresented groups including military veterans, incarcerated people, school-aged children,

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and low-income individuals. This paper reports on one such effort in a small urban area in New England. After describing the development and implementation of a yoga program for low-income women with substance use disorders, qualitative data from participants is presented in order to evaluate the initiative and inform future programming and research.

### Yoga: Definitions and Impacts

Yoga is a broad term that encompasses a set of breathing, movement, and meditation practices that were first developed in India thousands of years ago (Khanna & Greesen, 2013). The practice seeks to foster a state of consciousness that balances physical, emotional, and spiritual health and encourages mindful focus on the present moment (Salmon, Lush, Jablonski, & Sephton, 2009; Telles, Singh, & Balkrishna, 2012). Yoga is a stand-alone intervention that may serve as a complementary or alternative therapy when used in addition to, or in place of, conventional health care (Blacher & Rundio, 2014).

#### *Impact of Yoga on Health Outcomes*

Research about yoga has suggested outcomes related to wellness and quality of life, including reductions in stress, anxiety, and depression (Bilderbeck, Farias, Brazil, Jakobowitz, & Wikholm, 2013; Danhauer et al., 2008; Kinser, Bourguignon, Whaley, Hauenstein, & Taylor, 2013; Muzik, Hamilton, Rosenblum, Waxler, & Hadi, 2012; Smith, Hancock, Blake-Mortimer, & Eckert, 2007; Uebelacker et al., 2010), improvements in mood, self-awareness, strength, posture, and flexibility (Calajoe, 1987; Conboy, Noggle, Frey, Kudesia, & Khalsa, 2013; Kissen & Kissen-Kohn, 2009; McIver, McGartland, & O'Halloran, 2009), and the effective management of chronic health problems and pain (Alexander, Innes, Selfe, & Brown, 2013; Cohen, Kanaya, Macer, Shen, Chang, & Grady, 2007; Field, 2011; Jacobs, Mehling, Goldberg, & Eppel, 2004). In comparative analyses, researchers have demonstrated that yoga is more effective (Bilderbeck et al., 2013; Javnbakht, Kenari, & Ghasemi, 2009) or comparable (Clark, Edwards, Thwala, & Louw, 2011; Shaffer, LaSalvia, & Stein, 1997; Skoro-Kondza, Tai, Gadelrab, Drincevic, & Greenhalgh, 2009; Smith et al.,

2007) to control groups. Systematic review of the random clinical trials about yoga have recognized these positive results and raise methodological questions about the research, including inadequate randomization, small sample sizes, high attrition rates, and lack of information about adverse effects (Kirkwood, Rampes, Tuffrey, Richardson, & Pilkington, 2005; Posadzki et al., 2014; Telles et al., 2012). In spite of these limitations, reviews describe the existing literature as "encouraging" and call for rigorous studies that more definitively measure the impact of yoga on health outcomes (Kirkwood et al., 2005, p. 890; Posadzki et al., 2014, p. 7).

### *Impact of Yoga on Addiction Outcomes*

Researchers have hypothesized that yoga may be particularly useful for people living with substance use disorders by encouraging mindful focus on self in the present moment and reducing anxiety and depression (Khalsa, Khalsa, Khalsa, & Khalsa, 2008; Salmon et al., 2009). The results of studies that test this hypothesis have been mixed. Several studies have found that there is no statistically significant difference in outcomes related to substance use between individuals who participate in yoga and those in traditional psychodynamic therapy groups (Hallgren, Romberg, Bakshi, & Andréasson, 2014; Shaffer et al., 1997). Other work has found yoga participants reported slightly more improvement on some psychosocial measures related to substance use (Khalsa et al., 2008). One of the reviews described above that found yoga research to be "encouraging but inconclusive" focused specifically on random controlled trials that tested the impact of yoga on addiction to alcohol, drugs, and tobacco (Posadzki et al., 2014, p. 7). That review concludes that while more research is needed, yoga outcomes are not worse than those produced with more conventional cognitive therapies. Qualitative and case study research on the topic finds that although substance users are often skeptical about yoga interventions at first, especially if program staff express resistance, participants ultimately report positive experiences (Calajoe, 1987; Hallgren et al., 2014; Shaffer et al., 1997). In short, while the results of studies about the impact of yoga on substance use disorders are promising, no definitive conclusions can yet be drawn, in part because

of the small number of programs and participants engaged in this practice.

### *Trauma-Sensitive Yoga*

Trauma-Sensitive Yoga (TSY) is a yoga style designed to support people who are survivors of trauma (Emerson & Hopper, 2011). The specific TSY protocol and related trainings were developed by researchers and yoga practitioners at the Trauma Center at Justice Resource Institute in Brookline, Massachusetts (Emerson, Sharma, Chaudhry, & Turner, 2009). This practice emphasizes the importance of respecting the yoga participants' physical space and personal boundaries and seeks to strengthen their sense of connection to the physical self and expand their capacity to keep thoughts in the present moment (Emerson & Hopper, 2011). For example, in TSY classes, prompts about poses are presented with language that invites participation, rather than forcing movement (Emerson et al., 2009). Intense poses are avoided, and instructors use verbal cues instead of hands-on assists. Participants are encouraged to make choices that reflect their bodies' diverse capacities. The classes are often provided in conjunction with psychotherapy and are delivered by certified yoga instructors who have undergone TSY training. Research demonstrates that TSY has a positive impact on PTSD symptomology and mental health, more generally (Clark et al., 2014; Emerson & Hopper, 2011).

### *Trauma-Informed Yoga*

This article describes the development and implementation of a trauma-informed yoga program for low-income women with substance use disorders. This language of a "trauma-informed yoga" practice is used deliberately to differentiate the intervention from TSY. While the trauma-informed yoga described in this research utilizes many of the principals and intentions of TSY, it is a less formal and structured program that was developed in response to limited resource availability. In other words, trauma-informed yoga is a generic term used to describe a yoga practice that incorporates the research and knowledge about trauma and yoga but is distinct from the

TSY protocol developed at the Trauma Center.

## Research Question

The goal of this research was to describe and evaluate a trauma-informed yoga program for low-income women with substance use disorders. The trauma-informed framework was chosen because many women with substance use disorders are survivors of lifetime trauma, and this personal history can complicate access to and adherence to treatment (Covington, 2008). Specifically, the research questions were: (1) What are the expectations and experiences of the women who participate in these classes? and (2) Is it feasible and acceptable to use class leaders with limited yoga training instead of certified yoga instructors? The significance of these questions is that many community-based organizations do not have the capacity to secure the services of certified yoga instructors, and those with specific TSY training could be even trickier to enlist. This research describes and explores a model for expanding community-based yoga opportunities that utilizes lay instructors to provide a basic trauma-informed practice.

## Methods

### *Recruitment*

All participants were recruited from a community-based non-profit substance abuse program, referred to here as SAP, which provides sober housing and supportive services to adult women in recovery. Most clients are referred to the program from in-patient treatment programs or correctional facilities, and many come directly from these institutions to SAP. Others may be homeless or unstably housed in the months and weeks before entering the program and are referred by case managers in the community. Clients generally reside at SAP for 60 to 90 days, during which time efforts focus on maintaining sobriety and securing employment and long-term housing. The State contracts with SAP for this service provision. The conditions of residence require residents to comply with all house rules, including participation in weekly community meetings and specific activities. The trauma-informed yoga class described

in this paper was one of these required activities. While the women were not forced to practice yoga, they did have to attend the class and could sit or lie on the mat if they choose not to participate.

Prior to participating in the program, at the start of their first class, women were asked to complete a self-administered anonymous intake survey that asked one close-ended question (Have you ever participated in a yoga class in the past? If yes, where and when?), and three open-ended questions (What is yoga? What do you hope to get out of this yoga class? What are your fears or concerns, if any, about this yoga class?). Women were also informed that after they attended three of the yoga classes, they could volunteer to participate in an evaluation interview for which they would be compensated \$20. There was no compensation for participating in the classes or completing the intake survey.

Approximately 30 women participated in the yoga classes over the course of this six-month evaluation. Using this method of convenience sampling, 10 women volunteered to participate in the evaluation interviews. Women who were willing to participate in the interviews could either identify themselves to the class instructor or SAP staff. The only eligibility criteria for interview participation were: (1) being an SAP client; and (2) having participated in at least three sessions of the SAP yoga program.

### *Intervention*

This intervention was developed as a collaboration between SAP and a non-profit yoga organization that trains people who practice yoga to lead trauma-informed yoga classes in their communities. The 10-hour training, taught by a certified yoga instructor, provides an overview about the impact of trauma on physical and mental outcomes and specific instructions about how to lead a trauma-informed yoga class. Upon completion of the training, lay instructors are paired with certified yoga teachers who volunteer to co-lead community yoga classes until the lay instructors are ready to lead on their own. The organization's goal is to create a sustainable network of yoga classes for people who would be otherwise unable to practice on a regular basis. The author is a SAP volunteer who

underwent the 10-hour training in order to develop and lead SAP's trauma-informed yoga program.

The trauma-informed yoga classes were held every week for six months on a weeknight in the cafeteria of a public elementary school located one block from the SAP apartment building where the participants resided. For the first 6 weeks, the class was led by a certified yoga instructor who had been matched with SAP through the training program; subsequent classes were led by the first author. The class, which lasted from 30-45 minutes and was accompanied by instrumental yoga music, included a series of simple seated and standing poses, with a focus on gentle twisting and stretching movements. Verbal prompts were sparse and focused on providing basic guidance in regards to moving into the pose (See Appendix A for typical routine). All direction was provided in English; Sanskrit language and terms were not used. Discussion of yogic principals or meaning was not included.

Based on the trauma-informed yoga training, deliberate efforts were made to give participants control over their class experiences (Emerson & Hopper, 2001; Emerson et al., 2009). At the start of each session, the women were invited to stay on the mat and engage only in postures that were available to them: Engagement in each specific posture was determined by the individual participants. Further, no breathing prompts, aside from general encouragements like, "Take a deep breath in this pose," and "Don't forget to breathe," were provided. Breathing exercises that require holding breath were not included, and participants were encouraged to breathe and move at their own pace. Mats were laid out in a circle with all participants facing the middle, so that no one had anyone behind them (Emerson, & Hopper, 2001).

### *Data Collection*

All of the participant interviews took place in a private office at SAP. The semi-structured interviews, that took about one hour to complete, were based on 11 questions about the yoga class and their current recovery efforts (see Appendix B). All interviews were audio-recorded, with the participants' consent.



### *Protection of Human Subjects*

This research protocol was submitted for review by the Institutional Review Board at the author's university. Given the minimal risks associated with participation in the study, the protocol was deemed exempt from IRB oversight. Informed consent was verbally administered to each participant and no names, phone numbers, or other identifying information were recorded. Audio recordings of the interviews were transcribed by a trained graduate student research assistant, and identifying information mentioned during the interview was removed during this transcription process. After transcription was complete, the audio recordings were destroyed.

### *Trustworthiness*

In total, 10 semi-structured evaluation interviews were conducted. The first five interviews were conducted by a trained graduate student research assistant who did not participate in the yoga classes and who had not met the study participants prior to the interviews. Due to unanticipated delays in data collection and limited study resources, the second five interviews were conducted by the author, who also led the yoga classes. While this design raises concerns about bias and response acceptability, several steps were taken to bolster the trustworthiness of the interview data. One, the potential conflict of interest posed by having the yoga instructor conduct the evaluation interviews was raised during the informed consent process. Participants were encouraged to provide frank input and assured that their responses would have no impact on their future participation in any of SAP programs, including the yoga classes. Two, during these interviews, the researcher asked several questions that explicitly sought constructive criticism and feedback about how the program might be improved. All of the participants' responses—whether positive or negative—were met with appreciation and interest.

### *Data Analysis*

Two types of analysis were conducted using the qualitative data collected through the study's intake survey and semi-structured evaluation interviews. First, responses were analyzed by question. For example, summaries were constructed

from the participants' responses to the survey question, "What is yoga?" Similarly, all interview participants were asked to identify their favorite part of the yoga class and the part of the class that they would change. A matrix was created to organize all the responses to each individual question and then this data was summarized. Word frequencies were conducted to understand common terms and associations that arose in response to particular questions. Taken together, this analysis offered an evaluation of the yoga program along the specific lines of questioning set forth in the study instruments. Also gathered and summarized for reporting purposes were the unique feedback that was volunteered by participants in response to non-specific questions (e.g., "Is there anything else you would like to add?"), individual circumstances, or unscripted exchanges.

Second, thematic analysis of the study data was conducted in order to identify and understand the prominent ideas and perceptions shared by participants across questions (Braun & Clark, 2006). This analysis sought to identify normative themes about the women's yoga experiences, rather than "answers" to specific questions. Thematic analysis is an iterative process wherein qualitative data—in this case, open-ended responses to the interview questions—are read and explored in order to become familiar with the data and then identify common ideas across the data set (Braun & Clark, 2006). When a particular theme was articulated by a single participant, it was coded and infused into future analysis. Then other transcripts were reviewed for this same theme. After the data had been thoroughly reviewed, the various nodes across which data had been coded were examined to determine if they might be collapsed into a single theme, and the ways in which they were related was explored (Braun & Clark, 2006).

## Results

In total, 28 women participated in the yoga classes. Attendance at any single class ranged from five to nine individuals. All of the participants were low-income women with substance abuse disorders who were living in SAP at the time of their class participation. Two SAP staff people, also women in recovery, also participated in some classes.

*Intake Surveys: Participants' Perceptions of Yoga*

Among the 28 class participants, 18 (69%) reported ever having participated in a yoga class before coming to SAP. The most common site for previous yoga practice was at in-patient substance abuse programs ( $n = 14$ ), followed by a yoga studio or gym in the community ( $n = 7$ ) and out-patient treatment ( $n = 4$ ). Yoga in prison ( $n = 2$ ) and high school ( $n = 2$ ) was also reported. The time elapsed since their last yoga class ranged from a few months to five years. The words that were most frequently provided in response to the question, "What is yoga?" included: body, relaxation, exercise, and mind. Stretching, spirituality, soul, connect, meditation, and practice were also common. A full list of the words used in response to this question, with frequencies, is included in Appendix C. This woman's response exemplifies the group's definitions, "It's an exercise that relaxes the mind, body and soul. Teaches how to get in touch with the body."

The women's responses about what they hoped to get out of the class reflected their understanding of the practice. Respondents spoke of breathing, balance, relaxation, stress-relief, stretching, and flexibility. Some had general aspirations, hoping for "peace," "spirits of good grace," or "anything positive." Only one woman mentioned weight loss. When asked if they had any fears or concerns, 18 women (69%) reported that they had none. Among the 10 participants who expressed worries about the class, three mentioned pre-existing medical issues (knee, back, edema) and the rest voiced generalized concerns that "I won't get it right" for a variety of different reasons (e.g., inability to concentrate or stretch).

*Interviews: Description of Sample*

Ten participants were interviewed about their experiences in the yoga class. This sample included nine women and one gender non-conforming person who self-identified as a hermaphrodite. Seven of the women were White, one was Latina, and two were African-American. Eight of the participants reported being in recovery from heroin use, one from cocaine, and one from marijuana. Although there was no question in the interview instrument that directly inquired about trauma,

six of the women disclosed histories of acute trauma in the recent past. These traumatic experiences included overdose, loss of parental custody, eviction, accidental death of fiancé, survival sex (i.e., exchange of sex for shelter, money or food), incarceration, and physical assault. Immediately prior to coming to SAP, five of the women were homeless, and five had been at court-ordered in-patient treatment programs. In terms of treatment services, all of the women were participating in either peer support or cognitive behavioral groups, including Alcoholics Anonymous, Narcotics Anonymous, bible study, and job skills training. In addition, one woman had received acupuncture at her methadone program and another was participating in a meditation course at her out-patient mental health program. In general, staying busy, through work and programs, and associating with non-drug using people were described as central to sustaining recovery. As PT 104 asserted, "I can't be bored."

*Physical activity.* While none of the women were currently participating in any kind of formal exercise or body movement program, all reported walking regularly as part of their daily transportation patterns: "I always tried to keep some form of exercise, even if it is just walking, just to keep myself going, 'cause I believe it's important" (PT 101). Their lifetime experiences with organized physical activity were limited. Four of the participants had ever taken a yoga class before entering the program at SAP. Some had played recreational sports in high school, but none had kept up with these activities during their adult lives, in part because of their substance use. As PT 110 described, "I used to go hiking all the time with my brother and my friends. I used to do stuff. I used to go swimming in my school. I used to do gymnastics, for a really long time, and then I got into drugs and I stopped doing everything, you know?"

*Expectations.* Upon hearing about SAP's mandatory yoga program, two of the women who had practiced yoga in the past looked forward to participating. Two other women, without prior experience, had curious and hopeful expectations about the program.

I was pretty curious about how I would feel before and after, because I know it's supposed to relax you and

it's a big thing about mind, body, and soul, and the breathing technique. So, yeah, I was pretty excited to see the transformation from me starting it up until the end of the class to see how I change, and how I felt. (PT 106)

The remaining six did not want to participate because they were busy with other activities or felt their physical limitations would make the experience painful. When asked about her first impressions of the yoga requirement, PT 103 replied, "To be honest, in the beginning, I hated it. I hated having to stop what I'm doing, because I felt like it's mandatory, I had to come... I just thought I wasn't going to be able to do it. I thought it was, you had to be flexible." The gender non-conforming individual (PT 102) felt she wasn't female enough to practice yoga:

I didn't want nothing to do with it. I said, "Dykes don't do yoga!" That's exactly what I said ... Yoga is stereotyped as, "Oh, this is what women do." And I don't necessarily, I identify as a female, but I don't necessarily feel like that's me ... so I didn't think I would really fit in with the whole yoga [thing] because it's all supposed to be females and feminine females and I'm not feminine, so why would I go to yoga? But then I started taking your class and I got more open-minded about it. It's like, well, anybody can do this. This isn't just for females.

Participants' concerns reflected preconceived notions about what yoga practice would require and were, for the most part, dissuaded by the actual class.

*Favorite parts of the class.* In spite of the fact that the majority expressed initial reservations about the class, all the women who were interviewed reported that they ended up enjoying the experience. When asked to identify their favorite parts of the class, participants pointed to many different elements of the program. Three women highlighted the benefits of the final relaxation pose at the close of each session: "My favorite part was at the end when she made us just lay there and kind of like sink into the mat, because I like kind of just got, like, calm and relaxed, and I wasn't everywhere in my brain and

stressed out" (PT 110). Two stated a preference for the movement portions of the class:

The thing that I like the most about it actually is the exercises themselves, and the different poses, like the cat and cow. I like the warrior poses, and I like how once you figure out the poses and how your body can adjust to each one ... how more graceful you become into doing them. And it feels nice, and I like how I feel afterwards where I can feel like, my body feels more stretched, more relaxed, more flexible.... it brings me back to a time when things were kind of better, you know? Like, my childhood when things were cool ... running around the courtyard, doing cartwheels and back bends. (PT 101)

The other four women spoke about the overall experience, the music, the opportunity to stay busy, and the sense of accomplishing something positive.

My favorite part is that I can do it. I didn't think I would be good at it, but it makes me feel so good afterwards, I just feel light and healthy. I don't know how else to explain it. It's relaxing, and you just, you just kind of, you just free yourself. It's like nothing can touch you. That's how I feel when I'm in yoga, like I'm untouchable. (PT 102)

When asked about what they would change to improve about the class, ideas for modifications included adding music, extending the length of each class, increasing the number of classes per week, conducting classes in outdoor settings, and increasing the variety of poses.

#### *Interviews: Thematic Analysis*

Three themes surfaced in the participants' descriptions of their yoga experiences: relaxation, mindfulness, and body movement. Noticeably absent from this data are narratives about physical conditioning.

*Relaxation.* The most frequently mentioned theme in response to questions about the yoga class was relaxation. All ten

of the participants named this outcome as a benefit of practicing yoga. Women described their daily lives, busy with efforts to secure employment, housing and sobriety, as stressful. In her interview, PT 105 emphasizes the on-going and persistent pressures of her current existence, "I am so stressed out ... I know I am, but as long as I don't think about it, I think I ain't, but I know I am ... I am just going where I'm going and I don't see no body." PT 107 reflected the same sentiment, "Every day is stressful, either looking for a job, going to my program, whatever it is." In this context, women appreciated the opportunity provided by the yoga class, a "time to relax" (PT 107) and disconnect from their worries: "How do I explain it? With all the stresses of everyday life, for me, it's just nice to feel like you have some time for yourself. And that [yoga] is a good way" (PT 108). Similarly, PT 103 stated, "You're just taking a half hour out of your time to just like, drop everything and just have 'you' time for a minute, and it's very peaceful. I leave relaxed every time." Given the multiple demands of their recovery programs, permission to be still was treasured, "That's my time for me to relax ... just kind of let the earth support your body, and it does, it feels good to have that relaxing few minutes, because I think about how often am I able to really do that, and it's not very often" (PT 101). These narratives suggest that the relaxation benefits of yoga are well-matched to the specific challenges faced by women in recovery.

On a related point, participants associated the relaxation of yoga with improved sleep: "I've been sleeping better since I started yoga. My mind doesn't race, I don't wake up racing" (PT 102). Women with anxiety disorders also remarked that relaxing at yoga helped to reduce the symptoms of this condition: "I felt very less stressed, and very less anxious. And I have very, very high anxiety problems where it's, it's bad. So, it helps, it definitely helps" (PT 110).

*Mindfulness.* The second most common theme, raised by six participants, was mindfulness. As PT 109 described, the class was a space where she could manage her worries by staying in the present moment: "It's hard to wake up positive every day. So, with the yoga, I'm able to clear my mind and just listen to, [the instructor's] voice, and if my mind starts to go somewhere else, try to get back focused to that." Specifically, participating

in yoga suggested a focus on healthy self and healthy behaviors: "I can go to yoga and it just makes me feel like I don't need to go use. I'm better than that. I'm healthier than that. It keeps me on the right frame of being healthy and not using ... it's helping me focus on being healthy" (PT 102). Women reported that the practice built their capacity to manage difficult situations off the mat, "If I ever get worked up on the outside or get too excited or get too upset or whatever the case may be, I can just sit back and breathe on it and take a few seconds, take my time, and that's a lot yoga has to offer as well. It teaches you to take your time, at your own pace, so that's definitely something that I'm going to take with me" (PT 106). In the following extended passage, PT 101 expresses a range of mindfulness concepts and goals:

Yoga really helps with just keeping my focus and keeping my mind kind of in the here and now, or keeping it to where I want it to be, whether it's you know, like, just paying attention and doing the moves and concentrating on the moves ... [Yoga] gives me a lot of free, clear time in my brain, and that's so unheard of for me, because I'm usually all over the place and kind of, I feel like I'm going crazy half the time, but the yoga really helps with that, and it helps with just kind of focusing and just giving myself and that clear mind that I need. It's just so hard to get sometimes, especially when you have all these different things on your plate, you know? So, the yoga really, really helps with just giving me that clearing in my mind. (PT 101)

In this passage, PT 101 highlights the challenges of coping with many "different things on your plate" during recovery and the feeling of "going crazy half the time." In this context, the opportunity to just "concentrate on the moves" is "unheard of" and appreciated. PT 104 described experiencing a moment of peace, "When you sit for a while, it's like peace, you get that moment where you really feel it."

*Body movement.* A less pronounced theme in the narratives related to body and movement. PT 101, for example, identified progress towards an increased ability to move and control their bodies as a benefit to the class:



At first I felt very clumsy with the moves, but I noticed that from each time that I participated that it was ... easier to go into from one pose into another, and it definitely felt more fluid, I guess you can say. And that felt good, it feels good to be able to be like, "Okay," you know, "I feel like I'm doing this right." I feel like it gives me something to concentrate on and in a good way, and not something that, I can't do anything about. I feel like it's something that I can work on, and I can progress and become better at, and that feels good, because not everything that we do is that easy, or for me to kind of come together and feel like I'm doing something really productive for my body, I guess I can say, 'cause after so many years of abusing my body and not taking care of it properly, it feels good to be able to do good for it, you know?

As was described earlier, the women who were participating in the yoga class faced myriad challenges, many of which—for example, employment and housing—are shaped by structural dynamics and social issues that were difficult for them to control. Faced with these frustrating circumstances, the women appreciated engaging in an activity which they could control and in which they could progress. Further, the yoga class aligned with their recovery intentions and supported their efforts to make healthy choices and do something "productive for my body."

While not all the women described achieving the "fluidity" to which PT 101 progressed, the open expectations of the class allowed each woman to define success in her own way. As PT 109 explained, it was clear that just staying on the mat was enough: "We all grab a mat, and I even told them, 'If you can't do it, it's fine. Just sit on the mat, just close your eyes if you have to and listen, but try to stay focused, as if it was a class or something' ... [The instructor] reminds the group that, 'Okay, you don't have to do this, but here's an alternate move'" (PT 109). Her suggestion to her peers that they try "to stay focused, as if it was a class" suggests an interesting perception that the yoga program was not, in fact, a class. In this description, the program seems to be some kind of participatory

gathering where women can choose their own level of activity and engagement. Following every pose, as if it were a class, is an option, but not the only one.

*Absent: Physical conditioning.* It is worthwhile to note that women's narratives did not include expectations related to physical conditioning. While women discussed the benefits of movement and reconnecting with their physical selves, their feedback did not indicate that they thought yoga practice would lead to weight loss or specific strength-related goals. What was clear was that these women in recovery were building foundations and struggling to maintain their sobriety, not perfect their triceps muscles. The outcomes that they described (i.e., relaxation, mindfulness, movement) seemed to suffice: None of the women indicated that they thought the class should be more rigorous or involved. They expressed satisfaction with the level of exertion and challenge in the class.

## Discussion

This yoga program engaged a population of low-income women with substance use disorders in a weekly practice of gentle poses and stretches led by a volunteer instructor who was not a certified yoga teacher but had been trained to facilitate trauma-informed yoga in the community. While some of the women had been exposed to yoga in the past, primarily through in-patient substance abuse treatment programs, most were yoga naïve, with very limited practice experience. In large part because of this lack of familiarity with yoga and misconceptions about what the classes would entail, many of the women expressed reluctance about taking this class. However, when interviewed after actually participating in the class, all of them reported finding it beneficial. Specifically, they described positive outcomes related to relaxation, mindfulness, and body movement. In addition, participants, who perceived staying busy as key to their recovery, appreciated having a healthy activity to fill their time. Input about improving the class included suggestions for longer classes and more frequent meetings. So while the experiences were ultimately positive, with initially hesitant individuals calling for more classes, these findings suggest the need to either provide

information about yoga practice when recruiting or make the class mandatory in order to engage reluctant individuals.

The yoga classes, which included gentle poses and stretches, were simple enough that women without recent histories of physical activity or fitness could participate. Further, these modest moves were poses that the instructor was capable of facilitating, even without a yoga teacher certification. Advanced poses like arm balances and headstand series were not included; even the classic downward dog and sun salutations were deemed too complex for this setting. While the elementary level of the class limited the physical fitness benefits of the class (i.e., strengthening, weight loss), study data reveals that participants did not seek these types of outcomes. Data collected from intake surveys and evaluation interviews found that the women understood yoga to be a pathway to relaxation, mindfulness, and physical movement. These outcomes were well-matched to their current need to negotiate the strain and pressures of their recovery. At the same time, the classes were perceived as challenging, and women celebrated their improved ability to practice the poses. When women found that poses were not available to them, they understood that simply staying on the mat was enough. They enjoyed the movement and expressed a general enthusiasm for exercise.

Yoga is not generally available to low-income women with substance use disorders. While there is wide recognition of the relationship between mind and body, especially among survivors of trauma (van der Kolk, 2014), the women in this study were receiving primarily cognitive therapy; none were engaged in treatment that included physical movement. Study findings presented here demonstrate that it is feasible and productive for non-certified yoga instructors to receive a short training and lead basic yoga classes. While this class included only simple poses, the format was well-aligned with the women's low fitness levels and pronounced stress management needs. This option can facilitate broader implementation of yoga programs in community-based organizations that serve vulnerable populations by allowing existing staff, volunteers, or even clients, to lead yoga classes instead of relying on certified teachers. Having staff lead yoga classes presents the added potential benefit of allowing these employees to engage

in a healthy, stress-reducing activity during their work day. By lowering the training requirements for this specific type of gentle yoga, and making the practice more widely available, opportunities to conduct research about the impact of this type of intervention will also be expanded.

These findings should not diminish the expertise and critical role of certified yoga teachers in building community health. As was demonstrated in this project, certified yoga teachers provided essential support in the training of amateur yoga instructors. The goal of this type of intervention is not to supplant certified yoga teachers but rather to expand their reach. Creating opportunities for social service providers and agency volunteers to lead elementary yoga classes focused on gentle poses and stretches may generate the participation numbers that are needed to conduct rigorous evaluation of these interventions. In addition, an interdisciplinary network of yoga practitioners and lay instructors is more sustainable than one that relies entirely on a single segment of the yoga community to teach. At some point, if a comprehensive network of basic yoga instruction makes the practice more universally available, there would be a need for more highly trained teachers to lead advanced classes. However, at this point, the challenge is simply to bring more diverse and vulnerable populations to the mat. This study suggests a feasible pathway for building that opportunity in our communities.

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## Appendix A: Gentle Yoga Routine

1. Seated position
  - a. Focused breathing
  - b. Side Bend with Neck Release
2. Lying on Back Abdominals
  - a. Goddess pose
  - b. Reaching Baby
  - c. Slow Crunch
  - d. Bridge
3. Table Top
  - a. Cow (inhale) – Cat (exhale)
  - b. Opposite Leg and Hand Extension
4. Child's Pose
5. Warrior Series #1: Repeat on both sides
  - a. Lunge
  - b. Twist: Elbow to Knee
  - c. Lunge
  - d. Runner's Stretch
  - e. Twist
  - f. Warrior 1
6. Warrior Series #2: Repeat on both sides
  - a. Bend at waist and hang
  - b. Warrior 2
  - c. Reverse the warrior
  - d. Side angle
  - e. Warrior 2
  - f. Step to front of the mat
  - g. Mountain pose with elbows together or eagle arms.
7. Lying on Back Stretches
  - a. Knees bent, feet on floor: Windshield legs back and forth
  - b. Lying pigeon
  - c. Twist
  - d. Hug both knees to chest
8. Final Relaxation

## Appendix B: Interview Guide

- 1) When did you move to SAP? Tell me about how you came to the program. (a) Clarify if coming from prison, or inpatient drug program, or some other referral.
- 2) Since moving to SAP, what programs or services have you been accessing to support your recovery? (e.g., therapy, AA groups, outpatient program, job placement, etc.)
- 3) What program has been most useful in your recovery? How so?
- 4) What program has been least useful in your recovery? How so?
- 5) Before you started the Yoga @ SAP program, had you ever practiced yoga before? (a) Where, for how long, what did you think of it?; (b) What impact, if any, did this prior yoga practice have on your life?; (c) When was the last time you had practiced yoga (before SAP class began)?
- 6) What were your expectations for the class when you began?
- 7) Tell me about your experience in the yoga class. (a) What was your favorite part?; (b) What part you would change?
- 8) On the evenings after you practice yoga, have you noticed any difference in how you feel? (i.e., changes in sleep, anxiety, drug use, attention, health?)
- 9) Would you recommend this class to a friend? Why or why not?
- 10) How has participating in a yoga class with other women living at SAP impacted your relationship with these people?
- 11) What do you see as your biggest challenge in maintaining your recovery? (a) How might yoga help you to cope with this challenge?

## Appendix C: What is yoga? Word Frequencies

Word(s)	Frequency
body; relaxation/relax/relaxes/relaxing	10
exercise(s); mind	9
stretching/stretch	6
spirit/spiritual/spirituality	5
soul	4
connect/connected/connects; meditation; practice	3
breathe/breathing; center/centering; strength/strengthening; stress; technique(s)	2
ancient; balance; bending; complete; confidence; emotional; endurance; focus; freedom; gaining; knees; lean; learning; mat; muscle; one; pain; peace; positive; power; release; setting; stamina; staying; teaches; tension; toning; touch; whole	1