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Résumé de l'article

It is not uncommon for youth (ages 2–19) to experience trauma. There are various types of traumatic events that may lead to adverse effects on youths' emotional, cognitive, social, physical, and spiritual health. It is important that youth receive support and resources to address the negative impacts trauma may have on their minds and bodies. Yoga is a holistic practice that may address these negative effects in all 5 health domains. However, there are many inconsistencies and gaps in the literature regarding the use of yoga with youth who have experienced trauma. The purpose of this descriptive survey research study was to address these inconsistencies by describing the approaches of 56 practitioners who utilize yoga with youth who have experienced trauma, and their perceptions of how and why they use yoga with these youth. Findings highlighted the importance of implementing trauma-specific adaptations when facilitating yoga with youth who have experienced trauma, such as increasing participant autonomy, providing a safe environment, and developing a therapeutic rapport. Results also indicated that the most common use of yoga among these practitioners was to address emotional and physical needs of youth who have experienced trauma. Implications of study findings and opportunities for future research are discussed.

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Abstract: It is not uncommon for youth (ages 2–19) to experience trauma. There are various types of traumatic events that may lead to adverse effects on youths' emotional, cognitive, social, physical, and spiritual health. It is important that youth receive support and resources to address the negative impacts trauma may have on their minds and bodies. Yoga is a holistic practice that may address these negative effects in all 5 health domains. However, there are many inconsistencies and gaps in the literature regarding the use of yoga with youth who have experienced trauma. The purpose of this descriptive survey research study was to address these inconsistencies by describing the approaches of 56 practitioners who utilize yoga with youth who have experienced trauma, and their perceptions of how and why they use yoga with these youth. Findings highlighted the importance of implementing trauma-specific adaptations when facilitating yoga with youth who have experienced trauma, such as increasing participant autonomy, providing a safe environment, and developing a therapeutic rapport. Results also indicated that the most common use of yoga among these practitioners was to address emotional and physical needs of youth who have experienced trauma. Implications of study findings and opportunities for future research are discussed.

Keywords: adolescents, children, youth, trauma, yoga, trauma-informed yoga, trauma-sensitive yoga

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According to Dr. Robert Black, the former president of the American Academy of Pediatrics, "Adverse childhood experiences are the single greatest unaddressed public health threat facing our nation today" (Keebler, 2017, para. 1). Adverse childhood experiences are potentially traumatic events that may lead to lasting impairment of overall health and well-being (Ranjbar & Erb, 2019). Trauma may be acute or chronic depending on whether the trauma is the result of a single event or repeated occurrences (Bui et al., 2014). Trauma can stem from various sources, including physical, emotional, or sexual abuse; physical or emotional neglect; major accidents; and parental mental illness (Keebler, 2017; Telles et al., 2012). In 2016, almost half (46%) of the U.S. population under the age of 17 reported having experienced at least one traumatic event (Sacks & Murphey, 2018). Such events can affect youths' development (Feldman & Vengrober, 2011).

Development can be divided into four stages: early childhood (ages 2–3), preschool (ages 4–5), middle childhood (ages 6–11), and adolescence (ages 12–19). Each developmental stage is marked by a change in how youth view and understand themselves and the world around them (Eccles, 1999). Each stage is typically characterized by the achievement of emotional, cognitive, social, physical, and spiritual milestones. Because development is progressive, the ability to achieve each milestone depends on the attainment of previous ones. Youth development and functioning may therefore be impaired if trauma is experienced during the developmental years (Racco & Vis, 2015). While traditional trauma treatments such as cognitive behavioral therapy have been shown to produce positive outcomes among youth who have experienced trauma, complementary and integrative health approaches that address both the body and mind should also be considered for treatment (West et al., 2017). Yoga is one such approach.

The Impact of Trauma on Youth

Trauma results from an event, or set of events, that cause extreme psychological and physiological stress (Ranjbar & Erb, 2019). Emotionally, trauma may increase fear, preventing calm and ultimately leading to dysphoria, a state characterized by terror, rage, and grief (Cook et al., 2005; Mulvihill, 2005). Trauma may also lead to a range of other issues among youth, including low self-esteem and poor body image, high levels of shame and guilt, difficulty in regulating emotions, and inability to label emotions (Cook et al., 2005). Cognitively, trauma may cause youth to have trouble maintaining attention, solving problems, and learning new information, and to suffer from impaired memory and decreased information processing (Cook et al., 2005). Trauma may also cause feelings of dissociation, which can be characterized by amnesia, depersonalization, and impaired memory (Cook et al., 2005).

Socially, trauma may cause difficulty in understanding others' emotions and perspectives (Cook et al., 2005). Social isolation is often the result, due to poor quality friendships, rivalry between siblings, inability to communicate needs, resistance to changing routines, and shame surrounding the traumatic event (Cook et al., 2005; Peltonen et al., 2010). These effects may

further impact youth by leading to sleep disturbances, disordered eating, and oppositional behavior (Cook et al., 2005). Physically, trauma has the potential to cause a permanent activation of the fight-or-flight response, which can lead to negative short-term (e.g., physical aggression) or long-term (e.g., becoming immobile) effects (Kisiel et al., 2009; Perry et al., 1995). Spiritually, youth who have experienced trauma may have a diminished feeling of safety, which can disrupt their peace of mind and hinder their connection to others and the world around them (Bryant-Davis et al., 2012; Walker et al., 2010). A youth's overall health comprises functional interactions between emotional, cognitive, social, physical, and spiritual health domains. When one health domain is impacted by trauma, the effects may extend to the others and to the individual as a whole (Feldman & Vengrober, 2011). The effects of trauma can also lead to an increased chance of developing adverse health conditions (Bethell et al., 2014).

Experiencing trauma as a youth has been linked to increased prevalence of chronic disease, higher cost of health care across the lifespan, and greater likelihood of being emotionally, cognitively, or physically unprepared to attend school (Bethell et al., 2014). Youth who have experienced trauma are at greater risk for developing depression, anxiety, other post-traumatic stress symptoms, heart and liver diseases, substance use disorders, and extreme anger as adults (Kimbrough et al., 2010; Mental Health Connection of Tarrant County, n.d.). To prevent, or decrease the likelihood of, these conditions, it is crucial that youth who have experienced trauma receive support and resources that address their specific symptoms.

Traditional trauma treatments, including trauma-processing treatment, insight-oriented therapy, and exposure therapies like cognitive behavioral therapy and prolonged exposure therapy, often do not fully address the complex manifestations of trauma-related symptoms (West et al., 2017). Trauma-processing treatment and insight-oriented therapy focus on processing traumatic experiences through verbal communication. Exposure therapies focus on exposing individuals to memories and trauma-related stimuli to help them cognitively process the traumatic experience with the goal of altering their responses to trauma-related stressors; research has found that these therapies do benefit youth who have experienced trauma (Foa, 2011; Racco & Vis, 2015). However, in most cases, these therapies fail to address somatic symptoms, as West et al. (2017) observed. In their study of 31 adult female survivors of chronic childhood trauma, the same authors suggested that complementary and integrative health practices can help fill this gap, a finding that may also apply to youth who have experienced trauma. For example, as a strength-based intervention, yoga may be used to address trauma in youth as it engages both mind and body, which could lead to empowerment and personal growth (Johnson et al., 2005; West et al., 2017).

Yoga: A Therapeutic Modality for Treating Trauma

Yoga is a mind–body practice that originated in India, and has historically been practiced in association with religions in Eastern cultures. Yoga was introduced to the West in the 19th century, and by the 20th century was increasingly being applied, without the religious dimension, for physical and psychosocial benefit (Douglass, 2007; Sengupta, 2012). In modern medicine, yoga is

sometimes used as a complementary and integrative health approach across the continuum of care (National Center for Complementary and Integrative Health, 2021). Yoga is composed of three elements, often known by their names in Sanskrit: physical poses (*asana*), meditation (*dyhana*), and breath work (*pranayama*); these collectively focus on the "unification of oneself" (Siegel et al., 2016, p. 94). Yoga may be beneficial for people who have experienced trauma thanks to its ability to positively impact emotional, cognitive, social, physical, and spiritual health (Beltran et al., 2016; Seena & Sundaram, 2018). In individuals who have experienced trauma, yoga has been found to lower muscle tension, improve hormonal activity, increase sense of community, and help in processing and shaping negative thoughts into more positive ones (Crews et al., 2016).

As trauma often affects individuals differently, modalities like yoga that allow for various styles (e.g.,vinyasa, yin), paces, durations, and techniques are vital in providing individually tailored treatments (Spinazzola et al., 2011). Six common styles of yoga are hatha, gentle, restorative, vinyasa, trauma-informed, and trauma-sensitive. Hatha yoga is not only the most common style of yoga (Kiecolt-Glaser, 2010), but also the foundation of all other yoga styles (Mustian, 2013; Mustian et al., 2013). Hatha yoga focuses on the three components of yoga: meditation, physical postures, and breath work (Elkins et al., 2010; Kiecolt-Glaser, 2010). Gentle yoga emphasizes relaxation through its focus on breathing and stretching (Cowen & Adams, 2007). Similarly, through the use of props, limited poses, and focused breath work, restorative yoga works to help the mind and body enter total relaxation (Danhauer et al., 2008; Elkins et al., 2010). In contrast, vinyasa is a more vigorous yoga style that focuses on fast flowing postures, often referred to as sun salutations (Elkins et al., 2010; Uebelacker, 2010). Lastly, both trauma-informed and trauma-sensitive yoga are designed for individuals who have, or may have, experienced trauma, but their exact differences are unclear in the literature.

While yoga has the potential to address the effects of trauma, the literature regarding how and why yoga is used with youth who have experienced trauma is inconsistent and sparse. In one of the few such studies, 30 adolescent females (ages 13–18) who had experienced sexual abuse and maltreatment participated in a "psychospiritual intervention" consisting of a combination of yoga and psychotherapies (Seena & Sundaram, 2018). Although improvement in the participants' emotional, cognitive, physical, and spiritual health was reported, neither the credentials of the yoga facilitator nor the content and format of the intervention were described (Seena & Sundaram, 2018). Similarly, Beltran et al.'s (2016) study involved 10 boys (ages 8–12) with histories of trauma who attended weekly 90-minute yoga-based psychotherapy group sessions for 14 weeks. The purpose of these sessions was to assist participants in developing a safe environment and personal boundaries, increasing self-awareness, and improving socialization. The majority of session descriptions reported by Beltran et al. (2016) described the focus of the session but did not detail specific exercises or yoga poses used. While the study showed promising results (e.g., improved emotional regulation) from using yoga with youth who have experienced trauma, the yoga facilitator's credentials and field of practice were not specified.

The lack of standardized reporting procedures specific to the use of yoga with youth who have experienced trauma contributes to inconsistencies in the literature regarding how, why, and by whom yoga is being implemented with these youth. These inconsistencies may cause practitioners to have difficulty planning and facilitating evidence-based yoga interventions.

Methods

The purpose of this descriptive survey research study was to describe practitioners who utilize yoga with children (ages 2–11) and adolescents (ages 12–19) who have experienced trauma, and their perceptions of how and why they use yoga with these populations. For the purpose of this study, trauma was defined as one or more adverse events that cause an individual to experience extreme stress resulting in negative effects on overall health and well-being (Ranjbar & Erb, 2019).

Participants

Using a criterion-based sampling strategy, participants eligible for this study were health care practitioners who self-reported graduating from their professional degree program and implementing yoga within the previous year with youth (ages 2–19) who had experienced trauma. Individuals who had implemented yoga solely during internship, practicum, or fieldwork experiences were excluded from the study. Information about the study and an electronic survey link were distributed across professional listservs and social media platforms related to health care practitioners and yoga therapists (e.g., the Yoga Alliance[1], Bridge Builders to Awareness in Healthcare[2]). Snowball sampling was also used for recruitment. Study participants who completed the survey were invited to share the survey link with other practitioners or colleagues they knew who fit the study criteria and might be interested in participating.

Data Collection

After receiving Clemson University's Institutional Review Board approval, a 27-item survey developed by the researchers was piloted online twice in order to strengthen its content and face validity. Participants were asked to complete different versions of the survey (e.g., children, adolescents, youth) using different devices (e.g., iPad, computer, mobile phone). Five individuals who were not health care professionals completed the first pilot, and four professionals with expertise in either trauma or yoga completed the second pilot. Participants were asked to focus on survey length, readability, and formatting; those with a background in trauma or yoga were also asked to comment on the appropriateness of content. Participants who completed the first round of piloting consistently reported the survey was too long, which led to the elimination of two

[1] https://www.yogaalliance.org/

[2] https://www.facebook.com/groups/bridgebuilderstoawarenessinhealthcare?_rdr

primary questions and 16 sub-questions. Results of the second pilot led to minor formatting changes, and the streamlining of questions.

The final 26-item survey was distributed electronically to participants through social media sites and professional listservs. The online Qualtrics survey (Qualtrics XM[3], Provo, UT) was anonymous and voluntary; all respondents provided consent to study participation before any survey questions were presented. Following two criterion questions confirming that participants had worked with children or adolescents (or both) who had experienced trauma, participants were asked to respond to questions related to how (14 primary questions, 27 sub-questions) and why (one primary question, five sub-questions) they implement yoga with youth who have experienced trauma. Nine demographic questions, with three sub-questions, were asked to obtain information about who implements yoga with youth who have experienced trauma.

Data Analysis

Survey responses were exported into IBM SPSS Statistics for Windows, Version 24.0 and cleaned in preparation for analysis. The 51 cases in which participants completed less than two-thirds of the survey, or provided contradictory responses, were deleted from the 107 total survey responses. The remaining 56 respondents made up the final study sample. Descriptive statistics, including frequencies and percentages of categorical variables and the standard deviation and mean of continuous variables were used to analyze the quantitative data. Both conventional and summative content analysis were used to analyze the qualitative data (Hsieh & Shannon, 2005). Using conventional content analysis, two researchers independently analyzed and coded participant definitions of "trauma-informed yoga" and "trauma-sensitive yoga". Codes were developed based on repeated patterns and commonalities within the data and then translated to final themes. To increase the credibility of data analysis, two researchers separately coded the participants' responses prior to comparing results to determine agreement. A third researcher also reviewed the qualitative data independently to confirm agreement with the final themes.

Several questions offered "other" as an answer option. On selecting "other", participants were offered a text box in which to provide an open-ended response. Summative content analysis was used to analyze these responses. Using the intercoder agreement process, two researchers grouped similar data into categories; a frequency count was then used to quantify commonalities within participants' responses. For example, when asked to elaborate on the "other" settings in which practitioners have implemented yoga with youth who have experienced trauma, the responses "Juvenile Justice Center – short and long term county program" and "Juvenile probation girls' empowerment program" were grouped together as "Juvenile justice centers" (n = 2).

[3]https://www.qualtrics.com/

Results

The online survey was completed by 56 participants (see Table 1). Nine respondents indicated having worked with children (ages 2–11), 25 with adolescents (ages 12–19), and 22 with both children and adolescents who had experienced trauma. The majority of respondents were female (50; 89.3%) and White (46; 82.1%). Participants ranged in age from 24 to 61 years old. Most participants (50; 89.3%) were United States residents, representing 22 states.

Who Implements Yoga With Youth Who Have Experienced Trauma

Participants were asked to indicate their primary area of professional practice from a list of health care professions. However, the most frequent response (16; 28.6%) was "other", specified as: professions related to yoga (n = 6); education (n = 4); miscellaneous (n = 4; e.g., hair stylist, equine-assisted learning); and marriage, family, and child therapy (n = 2). The next most frequently reported profession was social work (n = 13). With regard to professional experience, the number of years of practice reported by participants was divided about equally among those with less than 4, those with 4 to 10, and those with more than 10. Participants indicated various locations in which they had facilitated yoga with youth who had experienced trauma: community-based settings (21; 37.5%), outpatient mental health settings (19; 33.9%), and "other" settings (17; 30.4%) such as schools (n = 9), juvenile justice centers (n = 2), and private practice (n = 2).

Professional credentials were reported by 46 participants (82.1%), with some reporting having obtained professional certifications in specific areas: yoga (e.g., 200-hour Registered Yoga Teacher, Certified Yoga Therapist), trauma (e.g., Trauma-Focused Cognitive Behavioral Therapy, Professional Crisis Management), both yoga and trauma (e.g., 300-hour Trauma Center Trauma-Sensitive Yoga), and other (e.g., Licensed Clinical Social Worker, Licensed Marriage and Family Therapist). Most participants (45; 80.4%) believed that practitioners should obtain one or more yoga certifications prior to implementing yoga with youth who have experienced trauma. Recommended certifications included those specific to yoga (e.g., iRest, Registered Yoga Teacher-200, Inner Peace Yoga Therapy Teacher Training) and those for both yoga and trauma (e.g., Trauma Center Trauma-Sensitive Yoga Training, YogaFit for Warriors, Yoga for Humankind). Only 11 participants (19.6%) reported that they did not believe practitioners should have to obtain certifications prior to facilitating yoga with youth who have experienced trauma. Finally, most participants (46; 82.1%) indicated that they personally practiced yoga: 18 (32.1%) had practiced for 6 to 10 years and 13 (23.2%) for 11 to 15 years. See Table 1 for additional demographic details.

The 31 participants who had implemented yoga with children reported that the most common types of trauma were physical abuse (16; 51.6%), sexual abuse (14; 45.2%), and neglect (10; 32.3%). Additional traumas related to "medical trauma", "homelessness", and "trafficking survivors" were also reported. The 47 practitioners who had implemented yoga with adolescents reported that the three most common types of trauma were sexual abuse (25; 53.2%), physical abuse (23; 48.9%), and neglect (21; 44.7%); additional types of trauma identified were related to "gender identity", "immigration", and "education".

Table 1. *Who Implements Yoga with Youth Who Have Experienced Trauma (N = 56)*

Characteristic	*n* (%)
Gender	
Female	50 (89.3%)
Male	3 (5.4%)
Non-binary	2 (3.6%)
Prefer not to say	1 (1.8%)
Race	
White	46 (82.1%)
Hispanic, Latinx, or Spanish	5 (8.9%)
Asian	3 (5.4%)
Other	1 (1.8%)
Not reported	1 (1.8%)
Country of residence	
United States	50 (89.3%)
Canada	3 (5.4%)
Australia	1 (1.8%)
Finland	1 (1.8%)
Hong Kong (S.A.R.)	1 (1.8%)
Primary area of practice	
Other (e.g., hair stylist, education)	16 (28.6%)
Social work	13 (23.2%)
Yoga therapy	7 (12.5%)
Occupational therapy	5 (8.9%)
Recreational therapy	5 (8.9%)
Counseling	4 (7.1%)
Physical therapy	2 (3.6%)
Psychology	2 (3.6%)
Activity therapy	1 (1.8%)
Speech-language pathology	1 (1.8%)
Years of experience in clinical practice	
< 1 year	3 (5.4%)
1 to 3 years	16 (28.6%)
4 to 10 years	19 (33.9%)
11 to 20 years	11 (19.6%)
> 20 years	7 (12.5%)
Setting[a]	
Community-based program	21 (37.5%)
Outpatient mental health	19 (33.9%)
Other (e.g., schools, juvenile justice centers)	17 (30.4%)
Yoga studio	12 (21.4%)
Inpatient mental health	11 (19.6%)
Personal yoga practice	
Yes	46 (82.1%)
No	10 (17.9%)

[a] Participants were instructed to select all settings in which they had implemented yoga with youth who had experienced trauma. Only the most common responses are given here.

The 31 participants who had implemented yoga with children reported that the most common types of trauma were physical abuse (16; 51.6%), sexual abuse (14; 45.2%), and neglect (10; 32.3%). Additional traumas related to "medical trauma", "homelessness", and "trafficking

survivors" were also reported. The 47 practitioners who had implemented yoga with adolescents reported that the three most common types of trauma were sexual abuse (25; 53.2%), physical abuse (23; 48.9%), and neglect (21; 44.7%); additional types of trauma identified were related to "gender identity", "immigration", and "education".

Practitioners' Perspectives of Trauma-Informed Versus Trauma-Sensitive Yoga

As the terms "trauma-informed yoga" and "trauma-sensitive yoga" are often used interchangeably in research, participants were asked whether or not they believed these two terms were synonymous, and accordingly to construct either a shared definition or contrasting definitions. One participant did not respond to the question or provide any definitions. Thirty-three participants (58.9%) indicated that they believed that "trauma-informed yoga" and "trauma-sensitive yoga" were synonymous. Conventional content analysis of participants' definitions of the terms revealed two themes: (a) knowledge of trauma, and (b) a safe and autonomous environment. Several participants who indicated trauma-informed and trauma-sensitive yoga are synonymous terms defined them both as a type of yoga that is planned and facilitated by an individual who is trained in and knowledgeable about trauma. For example, one participant defined it as "yoga that is grounded in an understanding of trauma theory … how to assist survivors of trauma in asana … what happens in the body of those who have post-traumatic stress and how yoga impacts those symptoms". Similarly, another participant wrote: "Yoga practice with trauma in mind. It's understanding how yoga can help someone through trauma … it's knowing trauma responses and how different types of trauma may affect people." In referencing yoga and yoga facilitators' knowledge and understanding of trauma, several participants indicated that the content and delivery in this approach to yoga are deliberately planned to decrease trauma triggers. For example, one participant shared that the approach "carefully curate[s] the [yoga] sequence that doesn't trigger any past traumatic somatic experiences". Another participant wrote that "the [yoga] environment is set up in a way that reduces [trauma] triggers".

A second theme among practitioners who indicated that trauma-informed and trauma-sensitive yoga were synonymous terms related to the importance of creating a safe and autonomous environment. Participants commented that such yoga programs "allow [clients] a safe space to process and heal from trauma", offer clients "freedom of choice to move at their own pace … promotion of participation at their comfort level", and assist in "helping them to learn to listen to and feel safe in their own body".

For 22 participants (39.3%), "trauma-informed yoga" and "trauma-sensitive yoga" were not synonymous terms. The definitions provided by these participants suggest that trauma-informed yoga is a broader term intended to reflect a facilitation style in which yoga instructors plan and implement a yoga session with the intent of being supportive of individuals who may have a history of trauma, without actually knowing whether they do or not. For example, one participant wrote: "Teachers need to be aware that any student in any context could have experienced trauma … being a trauma informed teacher means … you creat[e] space in your class to allow students to

leave out parts of class they aren't comfortable with." Correspondingly, one participant described trauma-informed yoga as an "awareness that yoga is able to assist individuals who have had past trauma"; another defined it as "general yoga open to the general public that incorporates some information related to trauma theory and best practices for trauma care". Participants' definitions referenced the importance of "allowing participants to be in charge of their practice" and "considering the needs of those in your class. Creating a safe environment …", but indicated that "a focus on alignment, sequencing, etc." may still occur.

Over half (14; 63.6%) of the 22 participants defined trauma-sensitive yoga as a type of yoga for dealing with trauma, that is, as one put it, "specifically designed for individuals who have experienced trauma", or is a specific protocol "intended as an adjunct treatment for complex trauma and/or PTSD [post-traumatic stress disorder]". One participant defined trauma-sensitive yoga as:

> Working with a group [of individuals] that is in that group … because of the trauma they've faced. Coming to a group like that, I [yoga teacher/practitioner] make sure to leave out certain poses that have the potential to be triggering and generally spend less time on poses and more time on mindfulness and connection.

Another participant defined trauma-sensitive yoga as "a trauma-specific approach that integrates a more intentional focus on relational safety, power dynamics, choice, and agency. Has more of a focus on befriending the body, not as much alignment or sequencing." Likewise, participants indicated that trauma-sensitive yoga allows "students … to focus on how they feel internally rather than worrying about what the poses look like externally" and "emphasizes developing a greater sense of mind–body connection". Specific to facilitation techniques, participant definitions referenced practice that involves "…noncoercive language, choice based and empowering …" and "… no physical assists …".

It is important to note that some individual participants' definitions of the two terms were the exact opposite of the aggregate themes presented above — their definitions of trauma-informed yoga reflected themes described above as associated with trauma-sensitive yoga, and vice versa.

How Yoga Is Implemented With Youth Who Have Experienced Trauma

Of the 31 participants who reported implementing yoga with children who have experienced trauma, 22 (71.0%) reported implementing group yoga sessions; amongst those, the most common (8; 36.4%) group size was 6 or 7 clients. Almost half (15; 48.4%) of participants indicated that they provided one-on-one yoga sessions with clients. The most commonly reported yoga styles used with children who have experienced trauma were trauma-informed yoga (19; 61.3%) and gentle yoga (14; 45.2%). The majority of participants working with children reported that trauma-specific trainings (28; 90.3%) informed their yoga planning and facilitation processes. When asked about how they prepared the yoga space, several strategies were indicated; offering different lighting options (20; 64.5%) was the most prevalent. Participants also adapted yoga sessions for

children who have experienced trauma by helping clients improve their ability to be present in the moment (29; 93.5%) and working to develop a sense of trust with clients (28; 90.3%).

Table 2. *How Yoga Is Implemented With Youth Who Have Experienced Trauma*

Implementation	Children (n = 31) n (%)	Adolescents (n = 47) n (%)
Group yoga sessions	22 (71.0%)	31 (66.0%)
2 to 3 youth per session[a]	1 (4.5%)	4 (12.9%)
4 to 5 youth per session	5 (22.7%)	8 (25.8%)
6 to 7 youth per session	8 (36.4%)	10 (32.3%)
8 to 10 youth per session	4 (18.2%)	5 (16.1%)
> 10 youth per session	4 (18.2%)	4 (12.9%)
One-on-one yoga sessions	15 (48.4%)	23 (48.9%)
Styles of yoga implemented[bc]		
Gentle yoga	14 (45.2%)	27 (57.4%)
Hatha yoga	12 (38.7%)	18 (38.3%)
Restorative	12 (38.7%)	25 (53.2%)
Trauma-informed yoga	19 (61.3%)	28 (59.6%)
Trauma-sensitive yoga	12 (38.7%)	29 (61.7%)
Vinyasa	11 (35.5%)	19 (40.4%)
Informed planning & facilitation of yoga sessions[bc]		
Evidence/research	24 (77.4%)	40 (85.1%)
Literature, research publications, etc.	24 (77.4%)	38 (80.9%)
Trauma-specific trainings	28 (90.3%)	34 (72.3%)
Preparation of yoga environment/space[ab]		
Lighting options	20 (63.5%)	33 (70.2%)
Essential oils	11 (35.5%)	15 (31.9%)
Reduce distractions	15 (48.4%)	31 (66.0%)
Set up music, etc.	14 (45.2%)	25 (53.2%)
Trauma-specific adaptations made for the yoga sessions[bc]		
Aided participants' ability to be in the moment	29 (93.6%)	38 (80.9%)
Developed trust between practitioner and participants	28 (90.3%)	44 (93.6%)
Provided choice for participants	27 (87.1%)	41 (87.2%)
Set a non-judgemental tone emphasizing safety	26 (83.9%)	43 (91.5%)
Used invitational language	20 (64.5%)	40 (85.1%)
Average duration of yoga sessions[c]		
15 minutes	8 (25.8%)	5 (10.6%)
30 minutes	8 (25.8%)	13 (27.7%)
45 minutes	7 (22.6%)	12 (25.5%)
50 minutes	3 (9.7%)	1 (2.1%)
60 minutes	5 (16.1%)	13 (27.7%)
Yoga sessions (%) used as adjunct to psychotherapy[c]		
0%	2 (6.5%)	4 (8.5%)
1–25%	5 (16.1%)	6 (12.8%)
26–50%	5 (16.1%)	7 (14.9%)
76–99%	5 (16.1%)	7 (14.9%)
100%	6 (19.4%)	13 (27.7%)
Unknown	7 (22.5%)	10 (21.3%)

[a] Group size percentages are calculated out of 22 (children) and 31 (adolescents).

[b] Participants were instructed to select all answer items that applied.

[c] Additional answer options were selected. Only the most common responses are included.

The yoga sessions designed by the participants for adolescents who have experienced trauma were broadly similar to those provided to children. Participants (n = 47) who reported offering yoga to adolescents implemented both group sessions (31; 66.0%), most commonly with 6 to 7 participants per session (10 of 31; 32.3%), and one-on-one sessions (23 of 47; 47.9%). Trauma-sensitive (29; 61.7%) and trauma-informed yoga (28; 59.6%) were the most commonly reported styles of yoga used with adolescents. Participants indicated that evidence/research (40; 85.1%), and literature/research publications (38; 80.9%) informed their planning and facilitation of yoga with adolescents who have experienced trauma. Preparing different lighting options (33; 70.2%) and minimizing distractions (31; 66.0%) were the most frequently reported strategies used to prepare the yoga space for adolescents. Developing practitioner–client trust (44; 93.6%) and using a non-judgemental tone to emphasize safety (43; 91.5%) were the most common trauma-specific strategies used by practitioners to support adolescents during yoga. See Table 2 for additional details.

Why Yoga Is Implemented With Youth Who Have Experienced Trauma

Participants (n = 31) who implemented yoga with children who have experienced trauma reported using yoga to improve all five health domains. Emotional health (87.1%) and physical health (64.5%) were the most frequently reported domains that yoga was used to address. Fewer participants indicated using yoga to help children improve their social (54.8%), cognitive (54.8%), or spiritual health (38.7%).

Practitioners working with adolescents (n = 47) also reported using yoga to improve in all five health domains. Again, the results were similar in this group as in children, with emotional health (89.4%) and physical health (70.2%) being the domains most frequently reported as targeted by yoga. Over half of participants indicated using yoga to focus on adolescents' social (68.1%) and cognitive health (61.7%); only 34% reported using yoga to improve their spiritual health. See Table 3 for additional details.

Discussion

The purpose of this study was to describe how, why, and by whom yoga is being implemented with youth (ages 2–19) who have experienced trauma. Results of the study support previous literature and address some of its gaps and inconsistencies by providing more detailed information about the planning and facilitation strategies used by practitioners implementing yoga with youth who have experienced trauma.

Libby and colleagues (2012) identified various health care professionals (e.g., social workers, psychologists, recreational therapists) who had implemented yoga among individuals receiving services within Veterans Affairs PTSD treatment programs. Most participants in the current study indicated a health care field as their primary profession, thus aligning with previous literature suggesting some health care practitioners use yoga as an adjunctive treatment. However, several study participants (16; 28.6%) reported professions outside health care (e.g., hairstylist, teacher)

as their primary profession. Relatedly, community-based and "other" settings (e.g., schools, juvenile justice centers) were frequently reported by participants as the setting in which they were offering yoga to youth who had experienced trauma. Thus, future research should explore use of yoga in community settings with youth who have experienced trauma by those who are not health care providers, as this population is not well represented in the literature.

Table 3. *Why Yoga Is Implemented With Youth Who Have Experienced Trauma*

Reason for implementation	Children (*n* = 31) *n* (%)	Adolescents (*n* = 47) n (%)
To improve emotional health[a]	27 (87.1%)	42 (89.4%)
To improve affect regulation[b]	26 (96.3%)	37 (88.1%)
To improve body image	19 (70.4%)	26 (61.9%)
To improve emotional expression	19 (70.4%)	30 (71.4%)
To increase autonomy	13 (48.1%)	30 (71.4%)
To increase self-concept	15 (55.6%)	29 (69.0%)
To increase self-esteem	19 (70.4%)	31 (73.8%)
To improve physical health[a]	20 (64.5%)	33 (70.2%)
To improve balance[b]	14 (70.0%)	27 (81.8%)
To improve coordination	17 (85.0%)	26 (78.8%)
To improve motor skills	15 (75.0%)	22 (66.7%)
To reduce heart rate	12 (60.0%)	21 (63.6%)
To improve social health[a]	17 (54.8%)	32 (68.1%)
To improve nonverbal communication skills[b]	11 (64.7%)	18 (56.3%)
To improve verbal communication skills	10 (58.8%)	13 (40.6%)
To increase interpersonal communication	12 (70.6%)	23 (71.9%)
To increase social competence	11 (64.7%)	24 (75.0%)
To improve cognitive health[a]	17 (54.8%)	29 (61.7%)
To improve memory[b]	9 (52.9%)	---
To increase ability to adjust to plans & strategies	7 (41.2%)	---
To increase ability to orient to time and space	10 (58.8%)	---
To increase ability to plan and anticipate	10 (58.8%)	---
To increase information processing	14 (82.4%)	---
To improve spiritual health[a]	12 (38.7%)	16 (34.0%)
To develop deeper understanding of spirituality[b]	4 (33.3%)	4 (25.0%)
To find meaning in life	6 (50.0%)	4 (25.0%)
To increase peace & harmony in lives of youth	9 (75.0%)	16 (100%)
To increase sense of purpose	7 (58.3%)	9 (56.3%)
Other (e.g., "family bonding", "resilience building")	7 (22.6%)	8 (17.0%)
No identified targeted outcomes	1 (3.2%)	1 (2.1%)

Note. Participants selected all answer items that applied for all survey items reported in this table. Due to a survey error, subcategories for "to improve cognitive health" within the adolescent data could not be reported.
[a] Additional answer options were selected. Only the most common responses are included.
[b] Percentages are calculated out of the total within each reason for implementation.

Research identifies a number of trainings in yoga (e.g., Registered Yoga Teacher, Certified Yoga Therapist; Covaleski, 2019) and in yoga for trauma (e.g., Trauma Center Trauma-Sensitive Yoga Facilitator; Cooke-Cottone et al., 2017) that are either required or recommended by organizations where yoga practitioners work with youth. Of the 56 participants, 46 (82.1%)

reported having various trauma-related (e.g., Professional Crisis Management), yoga-related (e.g., 200-RYT, C-IAYT), and yoga- and trauma-related (e.g., 300hour Trauma Center Trauma-Sensitive Yoga) trainings or certifications. A majority of study participants (45; 80.4%) also indicated that they believed that practitioners should obtain yoga certifications prior to implementing yoga with youth who have experienced trauma. While several recommendations were provided, there was a lack of consensus; therefore, future research is needed to determine which trainings or certifications should be recommended for, or required of, practitioners implementing yoga with youth who have experienced trauma. In that way, evidence-based standards of practice can be established to ensure a safe and productive experience for youth.

The existing literature uses "trauma-informed" and "trauma-sensitive" yoga terminology, but often fails to clarify the meaning of the two terms. Some studies may suggest that the terms are synonymous (e.g., Nicoreta et al., 2020), or provide a definition that complicates the matter by incorporating both. For example, Nolan (2016) defined trauma-sensitive yoga as a "style of yoga [that] adapts the typical yoga studio class — which may be overwhelming and unwelcoming for an individual with PTSD — to be trauma-informed" (p. 33). Study participants' definitions of trauma-informed and trauma-sensitive yoga confirmed the lack of consensus surrounding the meaning of these terms as 33 (58.9%) participants indicated that the terms were synonymous, while 22 (39.3%) indicated that they carried different meanings. Study participants who regarded the terms as synonymous described them as reflecting yoga being facilitated in a safe and autonomous environment by instructors knowledgeable in trauma. This perception was reflective of both trauma-informed and trauma-sensitive yoga. However, the literature does differentiate between the terms, defining trauma-informed yoga as a method used by yoga teachers who have been educated in trauma and its potential impact on individuals; this training is applied when planning and facilitating community yoga sessions under the assumption that anyone who participates the sessions may have experienced trauma (Cook-Cottone et al., 2017).

In contrast, trauma-sensitive yoga is defined as a type of yoga that is used as an adjunctive treatment with individuals who are receiving treatment for, and working to recover from, trauma (Cook-Cottone et al., 2017; Jackson, 2014). Definitions of trauma-sensitive yoga provided by those study participants who regarded the terms as not synonymous closely align with the literature and confirm their perception that trauma-sensitive yoga applies to treatment specifically with individuals with a known trauma. Similarly, participants' definitions of trauma-informed yoga suggest that it is a facilitation style implemented by yoga instructors for the purpose of their being cognizant of, and wanting to be welcoming and supportive of, individuals in attendance who may have a history of trauma. Thus, with trauma-informed yoga, teachers may not be certain whether particular individuals have experienced trauma, nor are they applying yoga for therapeutic purposes: the yoga sessions are open to individuals who self-select to attend. Future research should adopt standardized definitions of trauma-informed and trauma-sensitive yoga so that consistent and accurate terminology is disseminated in the literature and appropriately used in professional trainings and treatment practices.

In reference to how yoga is facilitated among youth with trauma, literature highlights the importance of yoga being provided in a safe and autonomous environment, where a strong client–practitioner therapeutic rapport can be established and maintained (Emerson et al., 2009; Ranjbar & Erb, 2019). A peaceful and safe environment, in which mirrors and distracting noises are limited, provides a space in which individuals can focus on addressing and overcoming the impact of their trauma (Anderson et al., 2015; Beltran et al., 2016). An autonomous environment offers them an opportunity to experience a sense of control of themselves and their bodies, and to practice making decisions during yoga, which could help to increase their decision-making confidence in areas of their life outside of yoga (Emerson et al., 2009; Justice et al., 2018). Therapeutic rapport between clients and practitioners is also important, as trauma can negatively impact youths' social development (Banyard et al., 2001).

Study participants frequently identified concepts associated with a safe and autonomous environment when defining trauma-informed and trauma-sensitive yoga; therapeutic rapport was less frequently reported in definitions. However, when asked to identify which of five trauma-specific adaptations they employed when facilitating yoga with youth who had experienced trauma, participants most often selected the three that align with providing a safe and autonomous environment and building therapeutic rapport: developing trust, providing participants with choices, and setting a non-judgemental tone that emphasizes safety. Further research is needed to better understand how and why the trauma-specific adaptations chosen by practitioners varied depending on the age of the clients and the types of trauma they had experienced, and whether the practitioner's approach was trauma-informed or trauma-sensitive.

Trauma-informed and trauma-sensitive yoga were the two most common types of yoga used by survey respondents who implemented yoga with adolescents who had experienced trauma. Those who used yoga with children who have experienced trauma most often reported using trauma-informed and gentle yoga. Significantly fewer practitioners reported using trauma-sensitive yoga with children than was the case with adolescents. This was an interesting finding, as respondents who worked with children reported that their yoga facilitations were informed by trauma-specific trainings. This incongruence could be attributed to the different interpretations of the terminology. In contrast, respondents who reported using yoga with adolescents who had experienced trauma identified research as the most frequent source of information used to inform their planning and facilitation of yoga sessions. Future research should focus on a better understanding of when and for what purposes practitioners choose to implement different types of yoga (e.g., Hatha, Restorative) when working with youth who have experienced trauma, and identify what the curricula of these sessions involve.

Study findings indicate that the primary goal of practitioners who offer yoga to youth who have experienced trauma is the improvement of the youths' emotional health. Outcomes related to improved physical, social, cognitive, and spiritual health were also reported. With regard specifically to emotional health, study participants reported working to help both child and adolescent clients to focus on, and increase, affect regulation, a functional ability often negatively

impacted by trauma (Cook et al., 2005; D'Andrea et al., 2012; Sevecke et al., 2016). Traditional trauma treatments do not often directly address the physical impact of trauma (Johnson et al., 2005; West et al., 2017); yoga does, thanks to its focus on mind–body connection. That may be the reason why physical health was the second targeted outcome reported among practitioners offering yoga to youth who have experienced trauma.

Limitations

The use of a non-standardized survey resulted in challenges that impacted data collection and results. For example, the wording of some questions and some answer options may have been confusing or duplicative, which would probably have impacted participants' responses. Also, some questions and answer options did not display correctly for respondents, due to an error in how the survey was set up. Several questions and data points were excluded from analysis as a result. To minimize errors in future studies, researchers using a non-standardized survey should increase the sample size used for piloting to increase the likelihood of errors being caught and corrected prior to data collection. Another limitation was that the population size of practitioners who implement yoga with youth who have experienced trauma is unknown; the results of this study are not generalizable as we are unable to determine whether the sample is adequately representative of the population. Additionally, due to selection bias, the sample consisted primarily of White females residing in the United States. Future studies should aim to obtain a more diverse sample, reflective of individuals with various racial and ethnic backgrounds, and across nations.

Conclusion

The opportunity for youth to engage in holistic treatment after experiencing trauma is important because trauma may impact all five health domains. However, the current research on yoga with youth who have experienced trauma contains many inconsistencies. By surveying practitioners, this research was able to gather foundational knowledge about how, why, and by whom yoga is implemented with youth who have experienced trauma. This study also identified various opportunities for future research to increase the understanding of yoga facilitations with this population, which the authors feel can contribute to the development of a standardized facilitation protocol.

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