

Hot yoga for pregnancy: a survey of hot yoga studio owners

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Abstract

PURPOSE: The literature supports the benefits of yoga during pregnancy, with burgeoning evidence regarding benefits of hot yoga (i.e., yoga in a heated room) among non-pregnant individuals. The American College of Obstetricians and Gynecologists provide recommendations on avoiding hot yoga while pregnant, although there is limited evidence to support or refute the practice. Furthermore, a prior study by Nguyen-Feng et al indicated that individuals trusted studio staff and friends/acquaintances who practiced hot yoga or prenatal hot yoga more than their obstetrician/gynecologist in providing guidance on the safety of prenatal hot yoga. This study aims to (1) provide descriptive information on knowledge, attitudes, and beliefs of hot yoga studio staff regarding the practice of prenatal hot yoga; (2) examine how hot yoga studio staff rank the credibility of obstetricians and other sources of information regarding the safety of participating in hot yoga while pregnant.

METHODS: The research team adapted an existing prenatal hot yoga survey, which was then pilot tested and validated in seven yoga facilitators with experience teaching hot yoga during pregnancy. Survey questions were finalized after receiving and incorporating pilot study feedback. Participants were recruited via email from publicly available websites of studios (N = 275) within three major hot yoga studio brands. Inclusion criteria were adults on the management team of a hot yoga studio. The survey assessed sociodemographics, personal practice of hot yoga and if applicable, during pregnancy, safety information, and knowledge-based questions. Participants were also asked to rank eight sources in terms of perceived credibility in providing guidance about practicing hot yoga while pregnant. For Aim 1, descriptive analyses were conducted. For Aim 2, a one-way analysis of variance was used to compare mean rankings of each of the sources, in which each source served as a within-subject factor. Bonferroni correction was used to account for multiple comparisons. Compensation was \$15-25, depending on survey completion date (February 1 to March 15, 2022). The Children's Mercy Hospital IRB deemed the study exempt from review. Procedures and the full list of measures were pre-registered with the Center for Open Science: <https://osf.io/wbs3n>.

RESULTS: Thirty-five participants responded to the survey request. Four responses were excluded due to incomplete responses, resulting in a final sample of 31 participants. Most participants had a bachelor's degree or higher (n = 27) and, on average, were 41.1 years old (SD = 10.6) with 13.4 years (SD = 5.1) of hot yoga experience. Of the respondents, 32% reported practicing hot yoga during a prior pregnancy, the majority had no reported adverse outcomes, and 87% reported they would likely practice hot yoga in future pregnancy.

Regarding Aim 1, participants encouraged women to practice hot yoga during all trimesters, with the second and third tri-

mester being the most frequent (1st: 48.4%, 2nd/3rd trimesters: 71%). Postures that were most frequently advised against practicing during pregnancy included prone (80.6%), inversion (64.5%), and supine positions (54.8%).

The most commonly perceived benefits of hot yoga practice during pregnancy included decreased stress and anxiety (90.3%), improved mood (90.3%), and decreased depressive symptoms (87.1%). The most commonly perceived risks of hot prenatal yoga included heat stroke or overheating (54.8%), muscle injury (48.4%), and hyperthermia (19.4%). Thirty nine percent believe that hot yoga during the first trimester does not increase the risk of birth defects.

With regards to the responsibility of the studio owners with pregnant students, the majority believed they should usually or always provide modifications (n= 28; 90/3%), hydration recommendations (n=24; 77.4%), and discuss safety of hot yoga for pregnant women (n= 20; 64.5%).

Regarding Aim 2, yoga studio leadership ranked obstetricians with the highest credibility, per estimated marginal means ($M_{i-j} = 1.91$, $SD = 0.32$, 95% CI [1.23, 2.58], with 1 = most credible). However, inferential tests suggested that credibility rankings for obstetricians were statistically equivalent to those for academic research journals, oneself and one's own knowledge/ experiences, and a friend/acquaintance who had practiced pre-natal hot yoga (95% CI [-3.39, 0.73]), with near 100% power for contrast tests. The remaining four sources (i.e., yoga studio employee; friend/acquaintance who practices hot yoga; non-social media news sources; family member, friend) were all rated statistically significantly less than the aforementioned sources-with the exception that a friend/acquaintance who practiced prenatal hot yoga was rated statistically equivalently credible to yoga studio employees.

CONCLUSIONS: These findings provide insight into the recommendations that women obtain from yoga studios when practicing hot yoga during pregnancy. Women are being encouraged to practice hot yoga during pregnancy with modifications and guidance from hot yoga studios. Further, obstetricians/gynecologists need to be aware that patients interested in practicing prenatal hot yoga may find other sources of information as credible as obstetrics medical providers.