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Perinatal (Re)experiencing of PTSD symptoms for Survivors of Child Sexual Abuse: An Integrative Review

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Abstract

Objectives. This integrative review aimed to synthesize both qualitative and quantitative research on the (re)experiencing of PTSD symptoms during the perinatal period for childhood sexual abuse (CSA) survivors.

Methods. Whittemore and Knafl's (2005) framework, which includes problem identification, literature review, data evaluation, data analysis, and results dissemination, was used. A search in four databases (i.e., PsycINFO, MEDLINE, Scopus, and ProQuest Dissertations and Thesis Global) yielded an initial sample of 3420 articles. After screening and deduplication, 16 articles met our inclusion criteria (i.e., history of CSA, minimum 8 weeks pregnant, reported quantitative statistics or qualitative findings, discussed PTSD symptoms) and were retained in the final sample.

Results. CSA survivors (re)experienced PTSD symptoms as a result of 1) aspects of their medical care (vaginal examinations, male medical providers, lack of control, and restraint), 2) physical sensations during pregnancy, childbirth, and breastfeeding, and 3) sex of the child (worries over child becoming an abuser/abused, male genitalia). CSA survivor's PTSD symptoms of intrusion, dissociation, avoidance, and hyperarousal were significantly greater throughout the perinatal period compared to individuals without CSA or with other traumas.

Conclusion. CSA survivors are at increased risk of (re)experiencing PTSD symptoms throughout the perinatal period, which may be due to several internal and external triggers. Further research is needed to understand external triggers outside of medical care, and how the unique context of pregnancy may differ from other life contexts for survivors of CSA. Findings point to the relevance of adopting trauma-informed practices with CSA survivors during their perinatal period.

Perinatal (Re)experiencing of PTSD symptoms for Survivors of Child Sexual Abuse: An Integrative Review

Child sexual abuse (CSA) is a pervasive issue as about 2.4 million Canadians reported experiencing sexual abuse before the age of 15.[1] Sexual abuse is associated with countless childhood disturbances including behavioural issues,[2] dissociation,[3] lower emotion regulation abilities,[4] and clinical levels of post-traumatic stress symptoms,[5,6] which can be long-lasting into adulthood.[5] For some individuals who are initially well-functioning or have recovered from post-traumatic stress disorder (PTSD), PTSD symptoms can be (re)experienced following an event reminiscent of the original trauma.[7] For survivors of CSA, the perinatal period (i.e., pregnancy to one year post-partum)[8] can be an important context where PTSD symptoms are (re)experienced, even more so than for survivors of other types of childhood traumas.[9–11] Therefore, the current integrative review aimed to synthesize both qualitative and quantitative research on the (re)experiencing of PTSD symptoms in CSA survivors during the perinatal period.

PTSD symptoms during the perinatal period are associated with negative pregnancy outcomes (e.g., high-risk pregnancies, preterm births, and ectopic pregnancies)[12–15] that may result from alterations of the neuroendocrine system in individuals with PTSD.[16] Furthermore, PTSD symptoms mediated the associations between childhood maltreatment subtypes, including CSA, and behaviors associated with an increased risk of pregnancy complications in expectant parents (e.g., lack of prenatal care, weight gain concerns, substance use)[17]. Accordingly, a better understanding of the aspects during the perinatal period that can trigger PTSD symptoms could help prevent avoidable pregnancy complications in CSA survivors and their ramifications for infant development.

Current State of the Literature

Past reviews have investigated the impact of CSA during the perinatal period. Leeners et al.[18] compiled information on pregnancy outcomes, health complications, and general psychological experiences of CSA survivors during the perinatal period. Their findings highlighted that CSA was associated with stress, anxiety, discomfort, health complaints, abuse during pregnancy, and increased risk of post-partum depression. While the review mentioned that memories of the CSA may be recovered during the perinatal period, they did not provide a comprehensive account of the specific triggers in which CSA survivors (re)experience PTSD symptoms. Additionally, an updated review is warranted since this review was published more than 15 years ago. A more recent review synthesized the quantitative findings regarding perinatal PTSD symptoms in CSA survivors.[19] Although they found mixed findings, conclusions did indeed indicate a relationship between prenatal/post-partum PTSD symptom scores and CSA. Nevertheless, this review only examined overall PTSD symptoms and excluded qualitative studies.

The current review

An updated fine-grained exploration of the specific contexts in which CSA survivors (re)experience PTSD symptoms (intrusion, avoidance, dissociation, hyperarousal)[20] is needed. A comprehensive review systematically assessing the quality of available quantitative and qualitative research will reveal gaps to be filled by future research and provide recommendations for practice and policy.[21,22] An in-depth understanding of the PTSD symptoms (re)experienced in pregnant and post-partum CSA survivors will provide essential cues to best support survivors throughout this highly sensitive period.

The purpose of this review was to 1) synthesize both qualitative and quantitative findings and 2) appraise the quality of the current literature on perinatal PTSD symptoms (re)experienced

by CSA survivors. As integrative reviews appraise the strength of the empirical evidence, identify gaps in current research, inform future research, connect related areas of study and work, and reveal fundamental issues, an integrative review methodology was relevant considering the current review's aims.

Methods

The review followed Whittemore and Knafl's[22] framework to enhance rigor and reduce bias and error, which progresses through several stages, including problem identification, literature review, data evaluation, data analysis, and results dissemination.

Search Strategies and Inclusion Criteria

A search strategy was devised with a librarian and performed in the databases PsycINFO (Ovid; 1806-Present), MEDLINE (Ovid; 1946-Present), Scopus, and ProQuest Dissertations and Thesis Global in February 2021. Comprehensive search methods[23] were implemented by using Boolean logic, combining search terms including CSA, birth, labour, maternal health services, post-traumatic stress disorder, and psychological trauma (See Appendix A for the complete search strategy).

Relevant articles were imported into Rayyan software,[24] where titles and abstracts were screened by two raters. Raters first screened articles independently, then compared ratings until 100% agreement was reached, and discussed and resolved any discrepancies. Two researchers then independently screened the full-text articles for inclusion criteria of; (1) participants with a history of CSA; (2) participants at least 8 weeks pregnant (usual timeframe of pregnancy awareness) or who have given birth and (3) statistically tested (for quantitative studies) or reported qualitative results (for qualitative studies) pertaining to the relationship between CSA

and PTSD symptoms during the perinatal period. Again, any disagreements between raters were discussed and resolved.

Data Evaluation

Critical appraisals of all the selected articles were performed to evaluate risk of bias. For quantitative studies, The National Heart, Lung, and Blood Institute's Quality Assessment Tool for Observational Cohort and Cross-Sectional[25] assessed the quality of the sampling procedure, reliability and validity of the measures, data analysis, and covariates. Global quality ratings were designated as good, fair, and poor. For qualitative studies, The Critical Appraisal Skills Programme tool[26] assessed the appropriateness and rigor of the method, research design, recruitment, data collection, and data analysis. Additionally, the tool examined ethical considerations. Each item was rated on a scale of fully met (1 point), partially met (0.5-points), and not met (0 points). The overall quality rating was indicated by a qualitative label of good (scores > 9), fair (scores between 7.5-9), and poor (scores < 7.5).[27] Two researchers assessed each article until 100% agreement occurred and then performed independent quality ratings on the remaining articles, discussing any uncertainties to reach a consensus.

Data Extraction and Analysis

One researcher extracted data that included the (1) study aims; (2) study design; (3) sample characteristics and sampling procedures; (4) measures; (5) data collection; (6) data analysis; (7) results; and (8) study strengths and limitations. Extracted information was reviewed by another researcher. The constant comparison method was used for data analysis purposes which included data reduction, data display, data comparison, and conclusion drawing and verification.[22,28]

Results

The preliminary search generated 3420 articles. After deduplication, 3375 articles underwent abstract and title eligibility screening. After applying the inclusion and exclusion criteria, a screen completed in Rayyan[24] excluded 3256 articles. One hundred and nineteen articles remained for full-text examination, resulting in the exclusion of 103 articles. Sixteen articles (8 quantitative and 8 qualitative) remained included in the integrative review. (See Figure 1 For PRISMA flow diagram and Table 1 for study characteristics).

Summary of Overall Themes

The included articles all explored various aspects of the perinatal period in which CSA survivors (re)experienced PTSD symptoms (*n* = 16). Perinatal medical care (*n* = 8), particularly vaginal examinations (*n* = 7), lack of control (*n* = 7), and movement restraint (*n* = 4) were discussed. CSA survivors also (re)experienced PTSD symptoms related to physical sensations (*n*=7) during pregnancy (*n* = 2), childbirth (*n* = 4), and during breastfeeding (*n* = 3). Sex of the child (*n* =1) was also a notable aspect. The quantitative articles described non-contextualized PTSD symptoms (*n* =8), including overall PTSD symptoms (*n* = 7), intrusion (*n* = 2), dissociation (*n* = 2), avoidance (*n* = 3), and hyperarousal (*n* = 2) that CSA survivors (re)experienced during the perinatal period (See Table 2 for a summary of the themes).

Perinatal Medical Care

Aspects of Perinatal Medical Care that Trigger PTSD Symptoms (*n* = 8)

Among studies that investigated the aspects of perinatal medical care in which CSA survivors (re)experienced PTSD symptoms,[29–36] seven studies emphasized CSA survivors' experiences during invasive vaginal examinations (e.g., vaginal swabs, cervical exam).[29–33,35,36] For example:

> "I just can't cope with it at all, I really can't and I know people were saying 'well you're having a baby, you've got to deal with things like that, but I couldn't, at all, I really couldn't (intake of breath) and um, I don't know – it felt basically as if every person that came in that room did an internal and that was horrible ...it was horrible and I – how it makes you feel... is how it made you feel when you were a child. It really does."[33 (p.3)]

Studies also highlighted specific aspects of vaginal examinations that induced PTSD symptoms for CSA survivors. For instance, taking specific positions,[31] being touched on intimate parts of their bodies,[30] pain,[32,33] and specific actions that mimicked what occurred during their CSA (e.g., the use of a light during vaginal examinations)[33] all evoked painful memories and distress.

In addition to vaginal examinations, CSA survivors (re)experienced PTSD symptoms when they felt a lack of control during their medical care (n = 7).[30–36] Four studies highlighted that a lack of control over who provided care, often related to an imposed male provider, was a trigger of PTSD symptoms for CSA survivors.[31,32,35,36] For example, compared to those without CSA, CSA survivors reported intense fear and distress about their pregnancy and delivery if their birth attendant was male.[31] This distress was even enduring in some cases, as one participant described still being distressed by that two decades after her child was born.[32] Correspondingly, studies identified that refusing a male care provider was often of utmost importance and helped reduce PTSD symptoms.[35,36] For example:

> "They are always uncomfortable to me ... Because of the abuse, I don't feel comfortable with men doctors ...I have to have a woman doctor...they tried to give me a man doctor, and I told them no, I don't want no man doctor. I'm uncomfortable with a man ... I don't want no more man doctors."[35 (p.491)]

Five studies indicated that aspects of certain medical procedures induced a lack of sense of control and prompted PTSD symptoms.[30,33–36] For example, awakening from anaesthesia after procedures had occurred without their knowledge,[33] being touched and examined without warning, or if the infant was taken away for examination or fed formula without consultation.[33] On the other hand, CSA survivors' felt their PTSD symptoms lessened when they advocated for their right to consent to medical procedures.[34–36]

Lastly, in four studies, CSA survivors endorsed (re)experiencing PTSD symptoms when they had limited movement during their perinatal medical care.[30,33–35] For instance, when receiving an epidural, being under anaesthesia, being hooked up to monitors and intravenous fluids, lacking personal space, and being physically restrained during childbirth.[30,33–35]

Overall, studies found that CSA survivors (re)experience PTSD symptoms throughout their perinatal medical care during vaginal examinations, when feeling a lack of control, and when they felt restrained or had limited movement.

Types of Symptoms (Re)experienced during Perinatal Medical Care

Seven of the included studies discussed the specific clusters of PTSD symptoms that CSA survivors experienced during their perinatal medical care,[29–35] with intrusive thoughts being the most frequently mentioned (n = 6).[29–33,35] Leeners et al.,[31] found that 41.2% of participants had memories of their CSA that arose during delivery and 9.7% had these intrusions for the first time since childhood. Many participants reported struggling throughout childbirth because they imagined their male medical attendant as their abuser.[30] Congruent with the general findings presented above, studies described that intrusive thoughts about the CSA appeared during vaginal examinations, when they felt a lack of control over their medical care, and while being

restrained, touched, and hooked up to machines.[29,30,32–35] Overall, intrusive thoughts arose during various procedures performed throughout perinatal medical care.

CSA survivors also reported dissociative symptoms (*n* = 2*)*.[30,31] In Leeners et al.,[31] 57% of participants experienced dissociation during childbirth. Dissociation often occurred when they felt objectified or that they were treated inhumanely [30] and described dissociation as feeling as if they had died and disappeared during childbirth:

> "I no longer knew I was giving birth. It was very unreal, but so is a rape. I felt that in a way, I left my body, like when I was raped. I did not know where I was, if I was above myself looking down. But it felt very similar"[30 (p.185)]

CSA survivors experienced avoidance by not seeking out medical care, avoiding male doctors, not disclosing their CSA, and not discussing their childbirth as (re)traumatizing (*n* = 3).[30,32,35] For instance, some CSA survivors delayed seeking perinatal care until the second or third trimester.[35] Participants worried they would be considered unfit for motherhood, have their child taken away, or would be seen as a difficult patient if they disclosed their CSA, which sometimes lead to them not being honest about their medical needs. [32,35]

Two studies discussed hyperarousal symptoms[34,35] typically seen as hypervigilance over every aspect of their medical care. For example, individuals exerted control by asking for elaborate plans to mitigate potential harm[34] and that consent be maintained through explaining each step of every procedure to minimize the cues that would trigger flashbacks.[35] In sum, CSA survivors across studies reported (re)experiencing intrusions, dissociation, avoidance, and hyperarousal in the context of perinatal medical care.

Physical Sensations (*n* = 7)

Pregnancy-related Sensations

Two articles discussed the sensations during pregnancy that evoked PTSD symptoms.[29,35] Sensations associated with fetal movement[35] and rapid body changes, including feeling out of control about how their bodies would change[29], felt particularly unsafe and caused CSA survivors to have intrusive thoughts and dissociate.[29]

Childbirth-related Sensations

Across four studies, physical sensations during childbirth triggered PTSD symptoms.[30,32–34] Studies emphasized that feeling pain[30,32,33] and pressure[33,34] in the vaginal canal during childbirth often lead to intrusive thoughts and dissociation. These physical sensations prompted some participants to remember their CSA experiences for the first time:

> "The memory of the violations during my childhood was locked in my birthing muscles for all these years, only recently coming to the surface of my conscious awareness. Such armoring can hinder the ability to open one's body, to trust that the body really can work okay and be safe. It is hard to believe that intense sensations in that region of the body do not have to mean bad things are going to happen"[34 (p. 216)]

Postnatal Sensations

In three studies, postdelivery physical sensations, particularly related to breastfeeding, triggered PTSD symptoms for some CSA survivors.[29,33,37] Breastfeeding induced flashbacks and intrusive thoughts because they felt trapped, controlled, and objectified by their child or by those watching them breastfeed in public.[33,37] Some CSA survivors questioned if breastfeeding was a form of sexual abuse toward their child and stated that breastfeeding difficulties made them feel as powerless as they did during their CSA.[37] On the contrary, breastfeeding was a healing experience for others:[29]

> "When it comes to breastfeeding you have to get your breasts out and that normalized my breasts somewhat [which] was actually a positive experience. That was a key turning point in the sort of how I thought pregnancy has been a big turning point in how I saw my body."[29 (p.474)]

Overall, physical sensations during pregnancy (e.g., fetal movement, changing body), childbirth (e.g.., pain, pressure), and breastfeeding induced PTSD symptoms for CSA survivors.

Sex of the Child

One study highlighted that CSA survivors (re)experienced PTSD symptoms related to the sex of the child.[29] CSA survivors were distressed when confronted with their child's nakedness, particularly male genitalia, and they worried that touching their child's penis during diaper changes was a form of sexual abuse. Some reported having intrusive thoughts about their CSA when thinking about whether their child would become a perpetrator (for males) or be sexually abused (for females).[29]

Non-contextualized PTSD symptoms (*n* = 8)

Overall PTSD symptoms

Seven studies highlighted the presence of overall perinatal PTSD symptoms scores.[9–11,15,38–40] For instance, compared to controls or those with other traumas, CSA survivors' likelihood of exhibiting PTSD symptoms during pregnancy and post-partum ranged from twice (OR = 2.06, $p < 0.001$)[15] to 5.33 times more likely[39]. CSA survivors' postnatal PTSD symptoms remained even when controlling for prenatal PTSD scores.[9–11,38]

Intrusions

CSA survivors had significantly more intrusions during mid-pregnancy than non-abused participants, but this finding did not hold postnatally (*n* = 2)[10,11] However, interpreting these

results requires caution due to discrepancies between findings reported in the text and in the tables of these articles.

Dissociation

CSA survivors had the highest levels of dissociation during pregnancy and postnatally compared to those without CSA ($n = 2$), and 7% of peripartum dissociation scores in those with CSA could be accounted for by prenatal PTSD and dissociation tendencies.[10,11]

Avoidance

CSA survivors showed more avoidance during pregnancy than those without CSA ($n = 3$), although there were overall decreases in avoidance symptoms from pregnancy to post-partum. Avoidance scores during the postnatal period continued to be significantly higher in those with CSA, even when controlling for their prenatal avoidance scores.[10,11,15]

Hyperarousal

CSA survivors experienced hyperarousal during the perinatal period ($n = 2$). [10,11] Although hyperarousal levels in mid-pregnancy were found to be roughly the same for individuals with and without a history of CSA, they were found to be significantly higher postnatally for CSA survivors.[10,11]

In sum, CSA survivors, compared to those without CSA and those with other types of traumas, had more PTSD symptoms throughout the perinatal period. These findings suggest that CSA survivors may be (re)traumatized by various aspects of pregnancy, childbirth, and post-partum.

Quality Assessment and Summary of Study Methods

Of the 16 studies, researchers rated eight as having good methodological quality, seven fair, and one poor. The main limitations of qualitative studies were insufficient considerations of

researcher and the participant relationships (n = 4), incomplete or ambiguous information on ethical considerations (n = 2), poor details on research design, recruitment strategy, and data collection (n = 3), unclear data analysis procedures and rigor (n = 1), or not providing future directions and implications of the research (n = 4). For quantitative studies, limitations included a lack of power analyses or sample size justifications (n = 2), consideration of confounding variables (n = 2), or recruitment procedure information (n = 1).

Discussion

The current integrative review's goal was to synthesize and appraise the quality of both qualitative and quantitative findings related to CSA survivors' (re)experiencing of PTSD symptoms during the perinatal period. This review of 16 articles revealed the various aspects of medical care, physical sensations, and that the sex of the child may lead to (re)experiencing of PTSD symptoms. Furthermore, CSA survivors showed higher levels of PTSD symptoms than individuals without CSA. Included quantitative studies discussed the frequency, severity, and pervasiveness of perinatal PTSD symptoms, whereas included qualitative studies revealed details about the contexts and mechanisms in which CSA survivors (re)experienced PTSD symptoms. Qualitative findings highlighted nuances often dependent on the specificities of the CSA experienced (e.g., using a light during a vaginal examination was reminiscent of their CSA).

Comparing our review to past ones, Leeners et al.,[18] similarly revealed many perinatal health and experiential outcomes for CSA survivors, including distress surrounding breastfeeding and fetal movement. However, they did not investigate specific PTSD symptoms clusters in these contexts. Additionally, Wosu et al.'s[19] findings indicated that CSA survivors may have higher levels of perinatal PTSD symptoms than those without CSA, but their review

also found evidence for non-significant relationships between CSA and PTSD. Of note, this review also included studies of poly-victimized samples and excluded qualitative studies.

The current review is unique by examining the specific contexts and relationships between CSA and perinatal PTSD symptoms through both qualitative and quantitative studies**.** This allowed for a more comprehensive understanding of how, when, and why CSA survivors may (re)experience perinatal PTSD symptoms. The quantitative studies statistically demonstrated that compared to those without CSA and other traumas, CSA survivors experienced higher levels and different rates of change in PTSD symptoms throughout the perinatal period. This may suggest that CSA survivors have unique characteristics given the context of their traumas (e.g., alterations to stress-sensitive brain regions during development)[41] and that the perinatal period may be uniquely (re)traumatizing for CSA survivors. This hypothesis warrants further attention and investigation. The qualitative studies provided a much-needed clarification of quantitative findings by capturing the contextualized lived experiences of CSA survivors[42]. For instance, qualitative interviews can capture the specifics of *why* vaginal examinations elicit PTSD symptoms. Qualitative studies also allowed for further explanation of the relationships between CSA-related triggers and the multidimensionality of PTSD symptoms (e.g., intrusion). Information from these studies calls for a research agenda allowing to identify ways to reduce or eliminate the (re)experiencing of PTSD symptoms during specific perinatal contexts. It also brings awareness to medical and psychosocial practitioners about the wide variety of triggers that may be present for CSA survivors during this sensitive period.

Limitations

Notwithstanding these contributions, some limitations are worthy of discussion. Most quantitative studies included did not provide information on the survivors' particular perinatal

PTSD triggers. Additionally, many studies excluded participants with psychological diagnoses. As PTSD symptoms resulting from CSA may be long-lasting[5] and increase during the perinatal period,[9–11] excluding these participants may not provide us with the full extent to which CSA impacts individuals' pregnancies. Also, most studies included participants involved in community resources, who may differ from those who have not yet sought out support.

The systematic appraisal also revealed limitations, with half of the included studies' ratings being of fair or poor quality, often due to not including confounding variables (n = 2), no sample size justification (n = 2), insufficient description or consideration of rigor (n = 1), and lack of ethical considerations (n = 4). Therefore, the validity, rigor, and reliability of included studies' results may have been compromised. Finally, the synthesized knowledge may be limited as the review only included 16 articles, and some studies used identical and overlapping samples.[9,10,11,15,32,33] Also, given discrepancies between written and table-displayed findings, results on intrusion symptoms may need to be interpreted with caution.[10,11]

Implications

Despite the limitations, the findings of the current review have important implications for research, medical care, psychosocial practice, and policy. Findings from this review predominantly concentrate on CSA survivors' medical care interactions and overlook other potentially relevant psychosocial aspects such as attention from strangers. Future research should include CSA survivors with psychopathology to reveal which aspects during the perinatal period may be associated with prolonged distress in clinical populations. Investigating confounding variables, such as multiple child maltreatment exposures[43,44] should also be addressed in future research. Finally, researchers must be mindful of the researcher-participant relationship to prevent (re)traumatization when studying this vulnerable population.

Our findings indicate the importance of trauma-informed primary care (TIPC) throughout the perinatal period for CSA survivors. TIPC is a healthcare approach built off the trauma-informed care (TIC) model but is specific to medical care.[45] Implementing TIPC means: 1) empathetic screening for trauma, 2) understanding the impacts of trauma, 3) patient-centered care, 4) promoting emotional and physical safety by eliminating triggers, and 5) knowledge of available helpful trauma-related treatments.[45] Psychological and psychosocial services must be available and offered as early as possible to CSA survivors, so the perinatal period is not (re)traumatizing and reduces the (re)experiencing of PTSD symptoms. Additionally, if CSA survivors (re)experience perinatal PTSD symptoms, psychological support should be incorporated into their medical care, given that evidence shows that PTSD symptoms can increase, be long-lasting, and negatively impact pregnancy outcomes.[10,11,12, 13,14,15,16]

Lastly, our findings reveal the importance of implementing and enforcing policy-driven trauma-informed medical and psychosocial care. Public funding of trauma-informed perinatal community resources (e.g., birthing, and parenting classes) that address the impacts of CSA during the perinatal period and provide opportunities for collaboration between medical staff and patients is necessary.

Conclusion

In conclusion, this integrative review acknowledges the dearth of research on which aspects cause CSA survivors to (re)experience perinatal PTSD symptoms and will inform trauma-informed care practices and policies aimed at supporting CSA survivors. Research should examine all aspects of the perinatal experience of survivors, including but not limited to their medical care. Our findings suggest that trauma-informed primary care practices (including pre-screening for CSA histories), conjoint psychological services and perinatal care, and the public

funding of perinatal community resources aimed at CSA survivors may help foster positive adaptation in CSA survivors during the perinatal period.

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Authors' contributions
Alesha Frederickson: conceptualization, methodology, data collection, formal analysis, writing-original draft preparation. **Audrey Kern:** data collection, writing-reviewed and editing
Rachel Langevin: supervision, conceptualization, data collection, writing- reviewed and editing.

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Authors declare no conflicts of interest or competing interests

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