Abstract

Purpose: To describe the relationship between experiencing traumatic childbirth events and burnout. **Study Designs and Methods:** This descriptive cross-sectional study used an anonymous online survey to assess traumatic childbirth event exposure and the three independent constructs of burnout: emotional exhaustion, depersonalization, and personal accomplishment. Participants were a convenience sample of registered nurses, obstetric residents, family medicine residents, and attending obstetricians across five hospitals from December 2020 through June 2021. The traumatic childbirth event questionnaire measured the frequency of traumatic childbirth event exposure, perception of severity, and perceived influence on the participant's professional practice and personal life. **Results:** Data were analyzed from 150 participants. Registered nurses represented the largest percentage of participants (66%). Components of burnout varied according to race and occupation. Asian/Pacific Islanders had significantly higher mean depersonalization scores at 10.1 (SD = 6.0). Resident physicians had the highest emotional exhaustion scores (M = 34.6, SD = 8.8). Traumatic childbirth events perceived influence on practice correlates with personal accomplishments. Yet, no relationship was observed between traumatic childbirth events, emotional exhaustion, and depersonalization. Linear mixed analysis revealed that hospitals account for 7.5% of the variance in emotional exhaustion scores, 11.1% in depersonalization scores, and 1.3% in personal accomplishments scores. **Clinical Implications:** Maternity clinicians experience burnout at similar rates to those in other specialties. Although traumatic childbirth events are infrequent and not strongly correlated with emotional exhaustion and depersonalization, hospitals should implement effective strategies to support clinicians after such events. Educational interventions can enhance knowledge and resilience, whereas specialized training effectively alleviates burnout. Development of evidence-based strategies that prioritize the wellbeing of clinicians and patients is crucial.

Key words: Burnout, psychological; Childbirth; Depersonalization; Midwives; Nurses; Obstetricians; Professional practice; Resilience, psychological; Traumatic.

BURNOUT AMONG NURSES, MIDWIVES, AND PHYSICIANS IN MATERNITY CARE EXPOSED TO TRAUMATIC CHILDBIRTH EVENTS

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Burnout among health care workers in the United States has been deemed a crisis by the US Surgeon General (U.S. Surgeon General, 2022). According to a recent report of US health care workers, 45% of nurses, 54% of physicians, and up to 60% of medical students and residents suffer from burnout (National Academies of Sciences, Engineering, and Medicine [NASEM], 2019). Burnout is a syndrome of chronic workplace stressors that has not been successfully managed (World Health Organization, 2019). Contributing factors to burnout include high workload, long work hours, loss of autonomy, low morale within the organization culture, poor management practices, frequent changes in management, stressful relationships with colleagues, lack of resources, role conflict, and exposure to trauma within the work environment (Izdebski et al., 2023; Maunder et al., 2022; Shatté et al., 2017).

Burnout is a serious issue that affects health care workers personally and professionally (NASEM, 2019; U.S. Surgeon General, 2022). Burnout consequences in the clinical environment may manifest as internalized burnout that causes mental health problems and externalized burnout that leads to counterproductive work behaviors (Kane, 2022). Both types can disrupt work performance and decrease the quality of patient care (NASEM, 2019).

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The Physician Burnout & Depression Report 2022: Stress, Anxiety, and Anger surveyed 13,069 physicians in 29 specialties and found emergency medicine physicians had the highest burnout rates (60%), followed by critical care physicians (56%), and obstetricians-gynecologist (OBGYN) physicians (53%; Kane, 2022). Like OBGYN physicians, 41% of US-certified nurse-midwives (CNMs) and midwives sampled in an online survey met criteria for burnout (Kerkman et al., 2019). According to Kane (2022), burnout in maternity care is thought to be attributed to long work hours, frequent on-call shifts, heavy patient load, and excessive administrative tasks. Aiken et al. (2023) identified under staffing as a contributor to physicians and nurses experiencing burnout. Gender is also a possible factor, with a higher percentage (56%) of women reporting burnout than men (41%; Kane, 2022). Garcia et al. (2020) found that reports of burnout also vary by race. Another contributor to burnout in maternity care is exposure to occupational trauma often in the form of secondary traumatic stress (Beck & Gable, 2012; Slade et al., 2020; Wahlberg et al., 2017).

All OB clinicians including registered nurses, midwives, and physicians may experience traumatic childbirth events (TCE), defined as the perception or actual threat to the life of the mother, the newborn, or both (Beck & Gable, 2012; Beck et al., 2015). Although maternal mortality rates are trending downward, maternity clinicians continue to experience TCE encounters especially in Black women who continue to have higher mortality rates at 49.5 deaths per 100,0000 live births in comparison to their White counterparts 19.0 deaths per 100,000 live births (Hoyert, 2024). TCE exposure and loss of life may increase burnout risk (Beck & Gable, 2012; Slade et al., 2020; Wahlberg et al., 2017). Kerman et al. (2019) and Slade et al. (2020) found significant associations between OB clinicians who experience TCE and anxiety, depression, and post-traumatic stress disorder. Professional consequences include nurses leaving the maternity unit, midwives withdrawing from full-scope practice, physicians approaching procedures with increased anxiety, and withdrawing from obstetrical practice (Beck & Gable, 2012; Slade et al., 2020). Coincidently, the professional consequences of occupational trauma mirror those behaviors associated with burnout (NASEM, 2019).

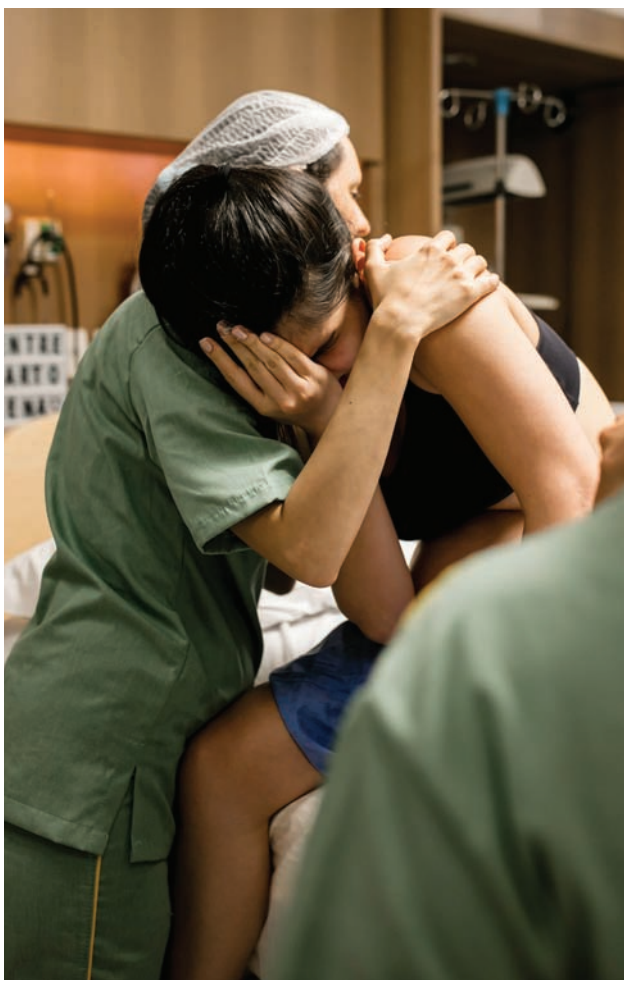
Although numerous burnout studies examined health care professionals from various specialties enduring extraordinary work-related circumstances, the examination of burnout in OB clinicians in relation to TCE exposure is limited. The purpose of this study is to describe the relationship between TCE exposure and burnout in OB care registered nurses, midwives, and physicians. Demographic and practice characteristics were evaluated based on

burnout subscale scores. Kane (2022) suggested that gender, hours worked, and duties are precursors to burnout.

Methods

The descriptive cross-sectional study reported here is part of a larger study that examined OB clinicians' experiences with TCE (Robinson et al., 2023). The research was conducted between December 2020 and June 2021, and it received approval and was granted exempt status from the Institutional Review Board of the University of Maryland, Baltimore.

We recruited participants from five maternity units located in Baltimore, Maryland. These hospitals serve a similar population of patients, and all had maternity care units and neonatal intensive care units with a level II or higher capability to care for both mothers and newborns with mild to severe health problems (American College of Obstetricians and Gynecologists, 2019; Stark, 2023). The organizational culture within all recruitment sites was similar, characterized by a transactional leadership style. Being that participants were recruited from five different hospitals, it was crucial to determine if the recruitment site contributes to variations in burnout subscale scores and if multi-level modeling would be necessary. This is done to account for hospital characteristics that may influence the outcome.



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Maternity health care professionals are not immune to burnout.

To provide a detailed explanation of how a convenience sample of OB clinicians, including registered nurses, CNMs, obstetrical residents, family medicine residents, and attending obstetrician physicians, was recruited for the study, as well as the process used to distribute the survey, please refer to the main study conducted by Robinson et al. (2023). The Robinson et al. (2023) study provided detailed description of how five maternity units in the Baltimore, Maryland area advertised flyers within their institution to encourage participation in an anonymous online survey that measured TCE and burnout in OB clinicians. This study is different from the first investigation in that an additional 22-item Maslach Burnout Inventory for Medical Personnel was also administered concurrently to OB clinicians during 2020–2021, which was not part of the original report.

The OB clinician survey was divided into three sections: Demographic, the TCE questionnaire, and the MBI-MP. The demographic section used multiple-choice questions to assess age, gender, race, and relationship status. Participants also answered multiple-choice questions to describe their professional characteristics, including employment status, occupational title, and years of experience.

Data for the TCE measure were collected in the main study (Robinson et al., 2023). The TCE questionnaire measured the frequency, severity, and influence on professional practice and personal life for eight TCEs. The eight specific TCEs included shoulder dystocia, uncontrolled postpartum hemorrhage, stillbirth or infant death, an unsuccessful newborn resuscitation, maternal death, uterine rupture, and instrument injury to the mother or baby during birth. These TCEs were identified based on the literature as events that may cause psychological distress and defensive practice behaviors. Pilot testing of the TCE questionnaire with US registered nurses, CNMs, and OB physicians (n = 15) indicated content validity. Within the main study, the four TCE subscales (frequency, severity, influence on practice, and influence on personal life) had Cronbach's alpha coefficients of .82, .77, .78, and .82 (Robinson et al., 2023).

The MBI-MP was used to measure burnout. It is a valid measure of burnout in US health care professionals with a Cronbach alpha of 0.7 (Maslach et al., 2018). Burnout has three components: Emotional exhaustion, depersonalization, and personal accomplishment. The MBI-MP has 22 seven-point Likert items across three dimensions: 9 for emotional exhaustion, 5 for depersonalization, and 8 for personal accomplishments. Responses range from 0 (never) to 6 (every day), and the three dimensions are summed and averaged independently to measure burnout (Maslach et al., 2018). Predetermined

cut-off scores to indicate high emotional exhaustion, depersonalization, and personal accomplishment were not used because developers of MBI-MP found this method lacked "diagnostic validity" (Maslach et al., 2018). Instead, *z* score values were calculated to determine cut-off points for high emotional exhaustion with *z* = Mean + (*SD* x 0.5) depersonalization with *z* = Mean + (*SD* x 1.25), and personal accomplishment with *z* = Mean + (*SD* x 0.10). Higher scores on the emotional exhaustion and depersonalization subscales and lower scores on the personal accomplishment subscale correspond to higher levels of burnout (Maslach et al., 2018).

Although there is currently no established effect size for the correlation between TCE exposure and burnout, several researchers investigated stress and burnout among emergency nurses and other health care workers during the COVID-19 pandemic. These studies reported a medium effect size with sample sizes between 111 and 160 (Lee et al., 2021; Lovell et al., 2022). We used an analysis of variance (ANOVA) to identify that a sample size of 140 was necessary power to study for medium effect size.

Data were analyzed using the SPSS Version 27. A series of ANOVAs were performed to identify associations among demographics, occupational characteristics, and burnout. Multilevel ANOVA was used to identify MBI-MP subscale score mean differences across demographic and practice characteristics, nested within each covariate hospital recruitment site.

To ensure adherence to the university's institutional review board, the research team did not have access to the email lists of each recruitment site to determine the return rate. However, each recruitment had its own survey link, which allowed for calculating variations in burnout scores by recruitment site.

Results

There were 150 participants in the final survey from five hospitals with maternity services. Of the 167 participants who had access to the survey, 17 cases had to be excluded due to incomplete responses. An intraclass correlation was calculated, revealing that hospitals account for 7.5% of the variance in emotional exhaustion scores, 11.1% in depersonalization scores, and 1.3% in personal accomplishment scores. Therefore, linear mixed modeling compared burnout by demographics, occupational characteristics, and TCE dimensions.

Most participants were women (92.7%) and identified as White (62.7%). See Table 1. Respondents' ages ranged from 21 to 75 years, with 90% being between the ages of 21 and 54. Most OB clinicians (58%) reported being married; 79.2% of OB clinicians were working full-time. Registered nurses (66%) made up the largest group. Years of work experience ranged from 1 year or less to 21 years or more; 15.3% reported having 21 years or more of work experience.

Table 2 summarizes the description of the TCE and MBI instruments. Both instruments indicated reliability, as Cronbach's alpha for each was greater than .75. For each MBI-MP subscale, the mean of the summed score and the mean of the averaged item are reported. In Table 2, 3% of participants reported high emotional exhaustion, and 13% reported high depersonalization. More than half of the participants indicated they feel a high sense of personal accomplishment (54.7%).

TABLE 1. CHARACTERISTICS OF PARTICIPANTS (*N* = 150)

Demographic Descriptor	*N* (%)
Gender	
Male	11 (7.3)
Female	139 (92.7)
Race	
White	94 (62.7)
Black	34 (22.7)
Asian or Pacific Islander	11 (7.3)
Hispanic or other	11 (7.3)
Age	
21–34 years old	70 (46.7)
35–54 years old	65 (43.3)
55–64 years old	12 (8.0)
65–75 years old	3 (2.0)
Relationship Status	
Married or civil union	87 (58.0)
Single in a relationship	28 (18.7)
Single	25 (16.7)
Divorced	9 (6.0)
Employment Status	
Full-time	118 (79.2)
Part-time	17 (11.4)
Self-employed or pro re nata	14 (9.4)
Occupational Title	
Registered nurse	99 (66.0)
Certified nurse-midwife	15 (10.0)
Attending physician	25 (16.7)
Resident physician	11 (7.3)
Years in Practice	
1 year or less	20 (13.2)
2 years to 3 years	28 (18.7)
4 years to 5 years	11 (7.3)
6 years to 10 years	31 (20.7)
11 years to 15 years	26 (17.3)
16 years to 20 years	11 (7.3)
21 years or more	23 (15.3)

Burnout by Demographic and Occupational Characteristics

Table 3 examines mean summed MBI-MP subscale scores by demographics and occupational characteristics. No significant differences were observed in emotional exhaustion depersonalization, or personal accomplishment scores within gender or age. However, male OB clinicians exceeded the high personal accomplishment criteria (M = 41.1, SD = 4.1). A significant difference in the mean scores of the depersonalization subscale based on race (F = 4.2, p < .01) was observed, with Asian/Pacific Islanders having the highest mean DP scores of 10.1 (SD = 6.0). Post hoc comparison using Tukey indicated that Asian/Pacific Islanders had significantly higher depersonalization scores than Blacks and Hispanics. In addition, Asian/Pacific Islander OB clinicians met the criteria for high emotional exhaustion (M = 30.4, SD = 11.3) while having the lowest scores for personal accomplishment (M = 35.0, SD = 6.7). Within marital status, another significant difference was observed in emotional exhaustion scores (F = 3.4, p < .05) and depersonalization scores (F = 4.4, p < .00). Tukey post hoc test revealed that single OB clinicians had significantly higher emotional exhaustion (M = 28.5, SD = 12.0) and depersonalization (M = 8.2, SD = 7.3) scores than married OB clinicians' emotional exhaustion (M = 21.8, SD = 10.9) and depersonalization (M = 4.3, SD = 3.4) scores.

Despite variations in employment status, the MBI subscale scores indicate that occupational characteristics do not significantly differ. A significant difference was observed in emotional exhaustion scores and occupational titles of OB clinicians (F = 4.0, p = .009). Post hoc testing confirmed that emotional exhaustion scores of resident physicians (M = 34.6, SD = 8.8) were significantly higher than attending physicians (M = 23.7, SD = 10.5), RNs (M = 22.9, SD = 11.4), and CNMs (M = 20.7, SD = 12.6). DP also significantly varied across occupational levels (F = 19.1, p < .001). Tukey post hoc test showed that resident physicians had significantly higher depersonalization scores (M = 15.7, SD = 6.6) than all other occupational titles. Resident physicians had nearly three times the depersonalization P scores of attending physicians (M = 5.9, SD = 5.1), CNMs (M = 5.5, SD = 4.0), and RNs (M = 4.6, SD = 4.3).

Mean Burnout Scores by TCE Dimensions

A series of unadjusted linear mixed models were conducted to determine if TCE dimensions were associated with burnout. Mean differences in summed MBI-MP subscale scores by TCE frequency of exposure, perceived severity of TCE, and perceived influence of TCE on professional practice and personal life are reported in Table 4. The only significant relationship observed was TCE influence on practice and personal accomplishment (F = 4.1, p = .02). OB clinicians who reported high TCE exposure had buffered one of several components of burnout, emotional exhaustion, and depersonalization by possessing the highest personal accomplishment scores (M = 40.18, SD = 5.1).

Discussion

Emotional exhaustion is a chronic state of physical and emotional depletion that results from excessive job or personal demands and continuous stress (Jin et al., 2020). High emotional exhaustion was observed in 31.3% of the sampled population. This burnout rate is lower than the 53% observed in OBGYN physicians during the COVID-19 pandemic (Kane, 2022), but it is unclear what measure was used. A 40.6% burnout rate was observed in US-certified

TABLE 2. STUDY MEASURES OF TRAUMATIC CHILDBIRTH EVENTS AND BURNOUT (N = 150)

	N (%)	Mean Summed Score (*SD*)	Average Item Score (*SD*)	Range	Cronbach Alpha
Traumatic Childbirth Events					
Frequency	150	8.1 (5.4)		0–26	.827
Severity	150	15.3 (7.9)		0–32	.773
Influence on practice	147 (98.0)	11.4 (7.5)		0–32	.782
Influence on personal life	148 (98.6)	(7.2)		0–32	.815
Maslach Burnout					
Emotional exhaustion	150	23.6[a] (11.5)	2.62 (1.3)	1–54	.924
Depersonalization	150	5.7[b] (5.4)	1.14 (1.0)	0–24	.758
Personal accomplishments	150	38.1[c] (6.3)	4.76 (0.8)	20–48	.768
High emotional exhaustion	47 (31.3)				
High depersonalization	20 (13.3)				
High personal accomplishment	82 (54.7)				

EE = emotional exhaustion; DP = depersonalization; PA = personal accomplishments
Note: [a]high EE ≥ 29.35; [b]high DP ≥ 12.45; [c]high PA ≥ 38.73

TABLE 3. BURNOUT SCORES BY DEMOGRAPHICS AND OCCUPATION CHARACTERISTICS (*N* = 150)

	N	F-Statistic	Emotional Exhaustion *M (SD)*	Depersonalization *M (SD)*	Personal Accomplishment *M (SD)*
Gender					
Male	11		24.18 (14.1)	7.09 (7.5)	41.09 (4.1)
Female	139		23.64 (11.6)	5.62 (5.1)	37.87 (6.3)
		F	.03	0.8	2.4
Race					
White	94		24.0 (11.4)	5.9 (5.6)	38.88 (5.9)
Black	34		21.83 (11.8)	4.7 (4.4)	37.00 (6.7)
Asian or Pacific Islander	11		30.45 (11.3)	10.1 (6.0)	35.00 (6.7)
Hispanic or other	11		19.36 (10.5)	2.9 (2.5)	38.00 (7.1)
		F	2.1	4.2**	1.7
Age					
21–34 years old	70		24.71 (11.7)	6.5 (6.4)	38.82 (6.0)
35–54 years old	65		23.87 (11.3)	5.4 (4.5)	37.03 (6.3)
55–64 years old	12		19.08 (11.3)	3.5 (2.6)	38.08 (6.9)
65–75 years old	3		12.00 (9.5)	3.6 (3.0)	44.67 (1.2)
		F	1.9	1.4	2.1
Relationship Status					
Married or civil union	87		21.83 (10.9)	4.3 (3.4)	38.91 (6.3)
Single in a relationship	28		26.50 (12.1)	8.3 (7.2)	37.96 (6.7)
Single	25		28.52 (12.0)	8.2 ((7.3)	36.56 (5.79)
Divorced	10		19.20 (10.4)	4.9 (3.7)	35.30 (5.03)
		F	3.4*	4.4***	1.7
Employment Status					
Full-time	118		24.19 (11.5)	6.03 (5.7)	38.33 (6.1)
Part-time	17		20.35 (11.0)	4.82 (5.0)	35.35 (6.5)
Self-employed	14		23.42 (13.8)	4.14 (3.1)	40.00 (6.4)
		F	.81	1.02	2.37
Occupational Title					
Registered nurse	99		22.87 (11.4)	4.61 (4.3)	37.86 (6.4)
Certified nurse-midwife	15		20.67 (12.6)	5.53 (4.0)	37.73 (6.2)
Attending physicians	25		23.68 (10.5)	5.88 (5.1)	39.48 (5.7)
Resident physicians	11		34.63 (8.8)	15.7 (6.6)	37.63 (5.7)
		F	4.0**	19.1***	0.5

Note: *Sig $p < .05$; **Sig $p < .01$; ***Sig $p < .001$

nurse-midwives and midwives sampled in an online study (Thumm et al., 2022), and 45% of nursing burnout reported in a national survey during COVID-19, (U.S. Surgeon General, 2022). Research suggests that burnout in staff nurses was high (48%) prior to the onset of the COVID-19 pandemic and that the onset of COVID-19 exacerbated nurse burnout (Aiken et al., 2023).

This study provides important insights into the variation in mean emotional exhaustion and depersonalization scores across different occupational roles. Despite a limited sample size (N = 11), residents exhibited significantly higher levels of emotional exhaustion compared to other occupational groups. Attending physicians, on the other hand, had emotional exhaustion

and depersonalization scores that were approximately 10 points lower than resident physicians. These findings are particularly concerning as high levels of both emotional exhaustion and depersonalization are key indicators of burnout (Maslach et al., 2018; NASEM, 2019). According to research, the workload of resident physicians that is beyond their control is a major factor contributing to burnout (Nene & Tadi, 2024). On the other hand, RNs are encouraged to follow policies that ensure adherence to staffing ratios and allocate work based on patient acuity, which can mitigate burnout (Simpson et al., 2019).

RNs had emotional exhaustion scores similar to attending physicians but had the lowest depersonalization scores of all roles. This means that although RNs experience emotional exhaustion, they are able to refrain from impersonal and cynical behavior. This low depersonalization finding is not uncommon. Cynicism, a key aspect of depersonalization, is more common in men than women. Because all RNs surveyed in this study were female, their low depersonalization scores could be explained by this gender interaction. Low emotional exhaustion scores observed in CNMs could be attributed to their practice guidelines and standards. As per the practice standards, CNMs are recommended to provide care to low-risk women and either co-manage or transfer women requiring high-risk maternity care (as per the American College of Nurse-Midwives, 2014). This approach attempts to ensure that CNMs are not involved in tasks beyond their capabilities, thereby reducing the likelihood of engaging in work-related tasks that may result in low emotional exhaustion scores. The observation of married OB clinicians having lower emotional exhaustion and depersonalization scores than their single counterparts aligns with the results of a study of trauma nurses. According to Cook et al. (2021), being married or having children and family is a form of social support and can be a coping mechanism for health care professionals. Participants who were married or in a civil union met the criteria for high personal accomplishment. High levels of personal accomplishment have been shown to serve as a coping mechanism that reduces burnout and maintains effectiveness for 6 months to 1 year (Lee et al., 2016). This is another example of social support influencing coping abilities.

Although there were limited significant relationships observed between TCE and burnout, OB clinicians who believed that their professional practice was significant-

TABLE 4. MEAN BURNOUT SCORES BY TRAUMATIC CHILDBIRTH EVENT DIMENSIONS ($N = 150$)

	N	F Statistic	Emotional Exhaustion *M (SD)*	Depersonalization *M (SD)*	Personal Accomplishment *M (SD)*
TCE Frequency					
Low	58		24.67 (11.9)	5.74 (5.8)	37.24 (6.9)
Medium	41		21.21 (11.2)	5.09 (5.1)	39.22 (6.4)
High	51		24.43 (11.4)	6.23 (5.2)	38.19 (5.2)
		F	1.0	0.4	1.2
TCE Severity					
Low	49		23.04 (10.1)	5.51 (4.9)	36.44 (6.4)
Medium	56		23.16 (12.8)	5.41 (5.3)	39.05 (6.4)
High	45		24.91 (11.4)	6.37 (6.0)	38.73 (5.6)
		F	0.4	0.5	2.6
TCE Influence on Practice					
Low	51		24.09 (4.5)	6.35 (6.3)	36.98 (6.3)
Medium	47		25.08 (11.8)	5.57 (4.2)	37.08 (7.0)
High	49		22.18 (11.5)	5.34 (5.5)	40.18 (5.1)
		F	0.6	.03	4.1*
TCE Influence on Personal Life					
Low	133		23.09 (11.7)	5.61 (5.5)	37.96 (6.4)
Medium	15		29.60 (7.8)	6.86 (3.7)	39.20 (4.8)
High	0				
		F	3.6	0.3	0.7

TCE = traumatic childbirth event
Note: $^{*}p < .05$, two-tailed

CLINICAL IMPLICATIONS

- Nurses at risk of burnout may affect quality of care for maternity patients.
- This study brings attention to the issue of burnout among nurses in obstetrics and suggests the need for measures to address this problem.
- Clinicians with a high traumatic childbirth event influence on practice also experienced the highest personal accomplishment. This relationship warrants further research to develop effective mitigation strategies.
- There is an undeniable correlation between burnout and reduced quality of care quality. Through co-management, nurse midwives can support physicians who are most at risk for emotional exhaustion and depersonalization.
- Through research, nurses can implement evidence-based burnout mitigation strategies in the maternity unit to improve maternal and fetal outcomes.

ly influenced by TCE exposure showed a higher mean personal accomplishment score than those who perceived TCE exposure to have a low influence on their professional practice. This finding may seem perplexing, but one explanation may be that this is post-trauma growth (Benight & Bandura, 2004). Posttraumatic growth is the ability to manage one's personal functioning and environmental demands in the aftermath of a traumatic event. TCE exposure may prompt OB clinicians to seek additional training, implement policies, or change their scope of practice, leading to a sense of professional accomplishment.

Strengths and Limitations

This study has limitations. Use of a cross-sectional design and convenience sampling limited our ability to explore causal relationships and may introduce recall bias. The study team members did not have access to each hospital's mass email list, and the list's accuracy could not be evaluated, nor could a response rate be calculated. The study was conducted in one city, and hospitals with level I neonatal intensive care units were excluded, which limits generalizability. Our study may also have measurement limitations because we did not specify the temporal aspect of TCE exposure. The absence of a temporal specification such as within the last year may have influenced the responses to the frequency, perceived severity, effect on practice, and personal life because of participant exposure to TCEs. Adding a temporal component to the TCE measure may have offered more insight into why there was no observed relationship between frequency and severity of TCE exposure with MBI subscales. Excluding staffing ratio questions data and 11% of participants due to MBI missing data recommendations may have resulted in the loss of valuable information. Our study commenced during the COVID-19 pandemic, which likely influenced burnout scores in our sample of clinicians.

Clinical Implications

The undeniable correlations between burnout and reduced patient care quality, as well as poor mental health, have been well-established. Our study shows that OB clinicians experience emotional exhaustion and depersonalization, which are the precursors to burnout and may result in reduced patient care outcomes. A recent meta-analysis of burnout intervention research concluded that educational interventions can improve knowledge and resilience (Serrano-Ripoll et al., 2020). Meanwhile, long-term institutional preparedness through policy implementation and specialized training that covers patient care, colleague communication, workload, and schedule rotation can offer effective mitigation (Grasso et al., 2022). Burnout research on OB clinicians in the United States is limited. Therefore, conducting more research on this clinician population is crucial to developing evidence-based strategies promoting clinician and patient wellbeing. ✣

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The authors declare no conflicts of interest.

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