Exploring Perinatal Nursing Care for Opioid Use Disorder

Knowledge, Stigma, and Compassion

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ABSTRACT

The opioid epidemic has greatly increased the number of pregnant women with opioid use and newborns exposed to opioids in utero. Mothers with opioid use disorder can face stigma by nurses in perinatal care settings, contributing to negative care experiences. A survey was distributed to nurses caring for mothers and newborns exposed to opioids in a large urban hospital in the Pacific Northwest United States ($n = 89$) from March to July 2019. Survey measures included participant characteristics, attitude toward substance use in pregnancy and postpartum (stigma, compassion satisfaction, comfort, and knowledge), and open-ended questions. Relationships among variables and questionnaire items were examined using Pearson's correlations, 2-sample t tests, and simultaneous multiple linear regression. Qualitative description was used to analyze open-ended questions. Nurses' stigma was negatively correlated with compassion satisfaction ($r = -0.63$), feeling knowledgeable ($r = -0.36$), and comfortable in providing care to this population ($r = -0.44$). Nurses identified defensiveness, lack of trust, and inadequate social support as key challenges in this patient population. Nurses suggested more support for mothers and nurses, increased nursing education, and clinical guidelines to improve clinical practice and foster therapeutic relationships. Findings highlight potential strategies to improve nursing care for chemically dependent mothers and their infants. These strategies may offer practical approaches to reduce stigma, develop therapeutic relationships, and improve patient outcomes. **Key Words:** compassion satisfaction, nursing care, opioid use disorder, postpartum, stigma

The epidemic of opioid use disorder (OUD) among women of reproductive age has grown dramatically in the United States over the past 20 years. Treatment of OUD in pregnancy with long-acting opioids such as methadone or buprenorphine reduces cravings, prevents acute withdrawal and return to use, and improves obstetrical and neonatal outcomes.[1] The cessation of placental transfer of opioids at birth leads to withdrawal symptoms in many newborns within 48 to 72 hours.[2] Neonatal abstinence syndrome (NAS) includes a constellation of symptoms when withdrawing from a variety of opioid drugs, both prescribed and illicit. The incidence of neonatal opioid withdrawal syndrome (NOWS) increased more than fivefold to 8/1000 live births between 2004 and 2014.[3] The symptoms of NOWS include central nervous system irritability, seizures, poor sleep, feeding difficulty, gastrointestinal dysfunction, and temperature instability.[4] The traditional

clinical approach includes monitoring at-risk newborns and treating symptomatic newborns with morphine or other opioids. Stabilization and subsequent weaning from opioids can occur in newborn intensive care units with possible separation of mother and newborn for several weeks.[5]

Prolonged hospitalization of newborns with NOWS challenges both mothers and nurses. It can be difficult for mothers to console an irritable newborn[6] due to co-occurring psychiatric disorders[7] and histories of physical and sexual trauma.[8] Nurses often have concerns about caring for postpartum women with OUD and infants with NOWS. Such infants are typically irritable and difficult to comfort; parents may act defensively, uncomfortably, or aggressively toward nurses; and, nurses may worry about the safety of the infant after discharge.[9–11] Maternal cohabitation with the hospitalized newborn ("rooming-in"), breastfeeding, and skin-to-skin care for newborns with NOWS have been associated with improved clinical outcomes, decreased length of stay, and decreased pharmacological therapy.[12,13] These findings have led to introduction of relationship-based models of care that shift focus from symptom management to engaging parents in helping the newborn eat, sleep, and be consoled.[14] Increased contact with the newborn is critical for maternal-infant attachment and infant mental health,[15] although these benefits can be confounded by the effects of poverty and social environment.[16]

Relationship-based care works best when parents are continuously present at the bedside to care for the newborn. The stigma of perinatal OUD can reduce parents' presence if they feel unwelcome or judged by perinatal nurses. The purpose of this study was to explore perinatal nurses' stigma for OUD in the care of families affected by OUD and NOWS during the postpartum period.

BACKGROUND

The stigma of substance use may be the most significant barrier to engaging families in the care of newborns affected by NOWS. Stigma is characterized by identifying and labeling differences in others to form a negative stereotype about members of a specific group,[17] resulting in the discrimination or status loss of the specific targeted group. Fear of stigma contributes to health inequity by creating barriers to seeking and continuing care.[18] Substance use is highly stigmatized by healthcare workers,[17] and people with substance use disorder (SUD) are stereotyped as dangerous, irresponsible, unpredictable, criminal, and immoral.[19] Carlson and Kieran[9] found that pregnant women with SUD were less likely to seek perinatal care, or divulge

critical information regarding substance use history, due to stigma and shame. New mothers with OUD who perceived caregivers as judgmental and stigmatizing were less likely to be feel supported in developing a healthy relationship with the newborn. In this way, stigma served as a barrier to healthy attachment by promoting social isolation, fear of judgment, shame regarding substance use, fear that the infant will be "taken away," and the internalized fear that they are an insufficient infant caregiver.[6,9] These perceptions can reduce the likelihood that mothers remain at the bedside, thereby interfering with newborn recovery from NOWS.

The bedside nurses in the postpartum or neonatal units are crucial for engaging mothers in the care of infants with NOWS. In addition to feeling stigma toward mothers with OUD, nurses can feel uncomfortable in providing care for postpartum women with OUD from a lack of knowledge about perinatal substance use.[20] These challenges can contribute to compassion fatigue, a combination of burnout, low compassion satisfaction, and secondary traumatic stress.[21–23] Nurses with compassion fatigue are less likely to support the mother's engagement in infant care, which is especially important when the infant experiences NOWS.[23] However, the relationships among stigma, knowledge, comfort, and compassion fatigue for nurses caring for postpartum families affected by OUD and NOWS are not well understood.

MATERIALS AND METHODS

Design

This study used an anonymous cross-sectional survey design with quantitative and qualitative questions.

Sample

From March to July 2019, a purposive sample of nurses was recruited through distribution of printed questionnaires by charge nurses or other hospital staff at a large urban community hospital in the Pacific Northwest with approximately 8300 births annually and an associated addiction inpatient service for pregnant and postpartum women. Eligibility criteria included employment as a registered nurse (in a regular or per diem position), English fluency, and working on a hospital unit where mothers with OUD or infants at risk of NOWS are managed. Research procedures were reviewed by the university and hospital institutional review boards. Participation in the survey was voluntary and implied consent. The questionnaire was anonymous and no identifiers were collected or retained with the data. Nurses received a $10 retail gift card in appreciation of the time involved.

Measures

The survey included items about demographics and employment such as primary hospital unit, nursing specialty or certification, years in practice, years caring for childbearing women and newborn, estimated number of patients with addiction cared for each month, personal or family history of substance use, gender, and age.

The Opening Minds Stigma Scale for Health Care Providers (OMS-HC)[24] is a validated measure of stigma as viewed by healthcare providers toward mental illness. The scale was adapted to measuring stigma toward postpartum women with substance use by changing the language in each item from mental health to substance use in postpartum women. For example, the item "I am more comfortable helping a person who has a physical illness than I am helping a person who has a mental illness" was changed to "I am more comfortable helping a postpartum woman without substance use than one with substance use." The OMS-HC is a 20-item self-report questionnaire using a 5-point Likert-type scale from never to very often. Each item is scored from 1 to 5, with a total scale score ranging from 20 (least stigmatizing) to 100 (most stigmatizing). Three subscales measure attitude, disclosure and help-seeking, and social distance, and Cronbach's α of 0.79 has been reported.[24]

The Professional Quality of Life Scale (ProQol)[22] is a validated and widely used instrument for measuring compassion satisfaction, burnout, and secondary traumatic stress in professionals. It has been used in a variety of caring professions including nursing. The compassion satisfaction subscale, which reflects the level of satisfaction with one's job and helping others, was adapted by specifying the context of substance use and postpartum women where appropriate. The subscale has 10 items using a 5-point Likert-type scale from never to very often. Each item is scored from 1 to 5, with a total scale score ranging from 10 (least satisfied) to 50 (most satisfied), and Cronbach's α of 0.88 is reported.[25]

Comfort in caring for patients was measured by a set of 5 new investigator-developed items, in response to the question: "Do you feel comfortable interacting with the following types of patients?" The scale options identified the following types of patients: (1) women with SUD during pregnancy and postpartum; (2) infants with NAS; (3) women with histories of sexual trauma, childhood abuse, or posttraumatic stress disorder (PTSD); (4) women with SUD needing extra help in parenting; and (5) women with SUD needing help with breastfeeding. Each item used a 5-point Likert-type scale from very uncomfortable to very comfortable and was scored from 1 to 5. Because this set of items is not a validated scale, each item was used separately in analyses.

Training in the care of women and infants affected by substance use was assessed by response to the question: "How many hours of training have you ever had in the following topics?" The 4 topics included care for women with SUD during pregnancy and postpartum; care for infants with NAS; care for women with histories of sexual trauma, childhood abuse, or PTSD; and providing parenting support for at-risk mothers. Response options were 0, 1 to 2, 3 to 4, and 5 or more. Knowledge was assessed with a single item, "I feel I have good knowledge about substance use in postpartum women" using a 5-point Likert-type scale from never to very often, scored from 1 to 5. Open-ended questions on the survey were included to explore the bias felt by nurses caring for women with OUD postpartum: "In your experience, do mothers of NAS infants have personality characteristics that make it difficult for you to work with them?" "What else is challenging about providing care for these families?" and "What would make it easier for you to care for these families?"

Statistical analysis

Completed questionnaires were manually entered using Research Electronic Data Capture (REDCap) tools, a secure, web-based application designed to support data capture for research studies.[26] Data were analyzed for normality, outliers, and missing values using IBM SPSS Statistics 19.0. Descriptive statistics included means, standard deviations, and ranges when appropriate. A 2-tailed t test for independent groups was used to test for differences in stigma and compassion satisfaction among nurses with and without personal/family history of substance use. Relationships among variables were determined using Pearson's correlation coefficients. Internal consistency reliability of instruments was measured using Cronbach's α. Simultaneous regression was carried out to predict compassion satisfaction with independent variables of interest. Missing data were handled pairwise in analyses. The sample size was not predetermined because of the exploratory nature of the work. With an α of .05 and a power of 0.80, the final sample size of 88 participants was powered to detect approximate effect sizes of 0.43 (d) for 2 group comparisons, a correlation coefficient (r) of 0.27, and an R^2 of 0.09 for multiple regression with 9 predictors.[27]

Qualitative analysis

Analysis of open-ended responses used qualitative description, a less interpretive and theory-driven methodology than other qualitative methods, which examines the surface meaning of data without abstractions.[28] Data analysis proceeded with 2 of the authors independently using qualitative content analysis.[29] Meaningful

units of text relevant to the research questions were selected and coded inductively. The codes from each transcript were organized into subcategories, categories, and themes. After independent analysis of the data, the authors met to discuss analysis of the data and to achieve consensus in the coding and categorization into categories and themes. Trustworthiness of the data analysis was evaluated using criteria of credibility, dependability, and transferability.[30] Credibility of the data analysis was evaluated by returning to the original texts in an iterative fashion to ensure congruence between the text and the proposed themes. Dependability of the analysis was ensured through ongoing documentation of the analysis with linkages between texts, codes, and data categories. Transferability of the findings was evaluated through congruence with the existing literature.

RESULTS

Demographic and employment characteristics of participants are presented in Table 1. The majority of participants worked full-time (62.5%), were female (98.9%), and 40 years or younger (55.7%). Approximately half the participants had 10 years or less of experience in nursing (48.8%) and in care of childbearing women or infants (50%). More than a third (39.8%) had specialty certification (RNC). Thirty-five percent of participants responded positively to the question: "Have you or a family member ever been affected by substance use?"

The majority of nurses felt comfortable or very comfortable caring for infants with NAS (83.4%). Fewer nurses felt comfortable or very comfortable (63.1%-69.7%) caring for women with substance use and assisting with breastfeeding and parenting. Less than the majority (45.3%) felt comfortable or very comfortable caring for women with past sexual trauma, childhood abuse, or PTSD. Nurses reported the number of hours of training they received in 4 types of care: women with SUD during pregnancy and postpartum, at-risk mothers needing parenting support, women with trauma histories, and infants with NAS. The majority of nurses (52.3%) had 5 hours or more of training in the care of infants with NAS. Nurses had fewer hours of training, however, in the care of women with SUD during pregnancy and postpartum, the majority of which (54.7%) had 2 hours or less in training. Similarly, only 31% of nurses felt knowledgeable about substance use in postpartum women often or very often.

The adapted stigma (OMS) and compassion satisfaction (ProQol) measures met normal distribution criteria. The internal consistency estimates were adequate, 0.72 and 0.92, respectively. The mean stigma among nurses with personal or family history of substance use

Table 1. **Self-reported demographic and employment characteristics of nurse survey participants (*n* = 88)**	
Characteristic	**n (%)[a]**
FTE	
0.9-1.0	58 (62.5)
0.6-0.75	20 (2.7)
<0.5 or per diem	4 (4.5)
Inpatient unit	
Neonatal intensive care	24 (27.3)
Postpartum	15 (17.0)
Labor and delivery	8 (9.1)
Special care nursery	5 (5.7)
Lactation	1 (1.1)
Nursing experience, y	
0-5	28 (31.8)
6-10	15 (17.0)
11-20	16 (18.2)
>20	28 (31.8)
Care of childbearing women or infants, y	
0-5	30 (34.1)
6-10	14 (15.9)
11-20	15 (17.4)
>20	27 (30.7)
Specialty certification (RNC)	35 (39.8)
Gender	
Female	87 (98.9)
Male	0
Other	0
Age, y	
20-30	27 (30.7)
31-40	22 (25.0)
41-50	10 (11.4)
51-60	20 (22.7)
>60	9 (10.2)
Self or family affected by substance use	31 (35.2)

[a]Values may not total 100% because of missing data.

(mean = 52.1) was not significantly different from that of nurses without such a history (mean = 51.8), $t_{(78)}$ = −0.173, P = .86. Similarly, the mean compassion satisfaction among nurses with personal or family history of substance use (mean = 30.9) was not significantly different from that of nurses without such a history (mean = 32.0), $t_{(73)}$ = 0.686, P = .495.

Correlates of stigma and compassion

Nurses' stigma and compassion satisfaction toward substance use in the postpartum period were negatively correlated (r = −0.63, P < .001). Thus, as stigma increased, compassion satisfaction decreased. Feeling knowledgeable about substance use in postpartum women was positively correlated with compassion satisfaction (r = 0.57, P < .001) and negatively correlated with stigma (r = −0.36, P < .001). Nurses' comfort in providing care to women and infants affected by

substance use was positively correlated to compassion satisfaction and negatively correlated to stigma, as noted in Table 2. The correlations among hours of training and stigma or compassion, however, were small and nonsignificant.

Predicting compassion satisfaction

Simultaneous multiple linear regression was used to examine the relationship between multiple variables simultaneously to better understand predictors of compassion satisfaction in the care of postpartum women with SUD. The regression model tested whether demographics, comfort with care, knowledge, and stigma could predict the dependent variable, compassion satisfaction. Regression results, shown in Table 3, indicated that the final model significantly predicted compassion satisfaction (adjusted $R^2 = 0.59$, $F_{(9, 58)} = 11.83$,

$P < .001$). Increased years of experience in caring for childbearing women or infants was associated with significantly decreased compassion satisfaction. Increased stigma was also associated with significantly decreased compassion satisfaction. Feeling more knowledgeable about substance use in postpartum women, however, was associated with significantly increased compassion satisfaction. Although comfort in caring for postpartum women with substance use and infants was correlated to compassion satisfaction when considered individually, these relationships became nonsignificant with the inclusion of other variables in the regression model.

Qualitative findings

Responses to open-ended questions about the characteristics of families affected by OUD and related caregiving challenges allowed a deeper understanding of nurses' attitudes about this patient population. Responses to whether mothers of NAS infants have different personality characteristics included 14 "no", 30 "yes," and 41 "sometimes/depends." Nurses responding "no" typically either indicated "not any more than non-NAS parents," or provided an explanation for the "no" response that demonstrated a level of understanding of the underlying stigma and shame and compassion for NAS mothers. For example, one nurse responded:

> No, I think at times they [the mothers] may feel judged by other parents or staff, and this can perhaps make them a little defensive which may appear as them being less receptive to teaching or information.

Across the open-ended responses, 4 themes were identified: mothers are defensive and difficult to help; lack of trust; inadequate social support for mothers; and the need for more nurse training and support.

Mothers are defensive and difficult to help

The first theme that emerged was that mothers are defensive and difficult to help. For example, the mothers of infants going through withdrawal "can be very defensive, have low self-confidence, try to excuse their behavior, blame others" and are "tired, uninvolved, passive aggressive, non-compliant, not accepting of education." These responses often included explicit or implicit judgments:

> It's difficult to work with mothers who are unapologetic to how their choices have affected their child, mothers who do not care about the consequences.

This response lacked empathy for what it must feel like to feel blame for infant harm. The idea that SUD is a "choice" reflects a model for mental illness as a moral failing rather than a disease model with external causes

Table 2. **Correlations between stigma, compassion satisfaction, comfort in providing care, and training in providing care in nurses ($n = 83$)**		
	Stigma	**Compassion satisfaction**
Comfort in providing care to ...		
Women with substance use disorders during pregnancy and postpartum	−0.44[a]	0.49[a]
Women with substance use disorders needing extra help in parenting	−0.48[a]	0.54[a]
Women with substance use disorders needing help with breastfeeding	−0.35[a]	0.42[a]
Women with histories of sexual trauma, childhood abuse, or PTSD	−0.42[a]	0.43[a]
Infants with neonatal abstinence syndrome	−0.24[b]	0.18
Training in care of ...		
Women with substance use disorders during pregnancy and postpartum	−0.13	0.11
Women with substance use disorders needing extra help in parenting	−0.17	0.17
Women with histories of sexual trauma, childhood abuse, or PTSD	−0.13	0.21
Infants with neonatal abstinence syndrome	−0.13	0.21

Abbreviation: PTSD, posttraumatic stress disorder.
[a]$P < .001$.
[b]$P < .01$.

Table 3. Compassion satisfaction regressed on nurse experience, comfort in care, knowledge, and stigma variables ($n = 68$)[a]

Predictor variables	b	SE	B	t	P
Experience with childbearing women or infants, y	− 0.946	0.453	− 0.170	− 2.089	.041
Personal or family history of substance use	0.173	1.172	0.012	0.147	.88
Knowledge	2.649	0.734	0.339	3.607	.001
Stigma	− 0.416	0.086	− 0.458	− 4.822	<.001
Comfort caring for …					
Women with substance use disorders during pregnancy and postpartum	0.591	0.948	0.068	0.624	.535
Infants with neonatal abstinence syndrome	− 1.103	0.704	− 0.136	− 1.567	.123
Women with histories of sexual trauma, childhood abuse, or PTSD	− 0.314	0.855	− 0.041	− 0.367	.715
Women with substance use disorders needing extra help in parenting	0.967	0.978	0.123	0.989	.327
Women with substance use disorders needing help with breastfeeding	1.001	0.765	0.134	1.308	.196

Abbreviations: PTSD, posttraumatic stress disorder; SE, standard error.
[a]Overall $R^2 = 0.65$, adjusted $R^2 = 0.59$, $F_{(9, 58)} = 11.83$, $P < .001$.

including a history of trauma and adverse childhood experiences.

Lack of trust

Nurses noted that mothers can feel "let down by the healthcare system" and inconsistent messages from different providers, making it harder to build a trusting and therapeutic relationship during a stressful hospitalization. One nurse reported that mothers "can be wary of staff, distrustful, unreliable, paranoid. The easiest ones are those who are open about their own problems/challenges." The lack of trust prevented open communication about care needs and development of a therapeutic partnership.

Inadequate social support for mothers

Two additional themes emerged related to support for the mothers and the nurses. In the first theme, respondents identified lack of adequate social support resources for the mother, including housing, mental healthcare, and classes. For example,

> [mothers] have associated problems of money, transportation, safe housing, food security, lack of phones, and older children without childcare. These children are often in open Child Protective Services care, and this can make the mothers feel defensive and that they have to prove themselves.

Extended family members were seen as not providing needed support to the mother when they behaved inappropriately or interfered with nursing care:

> Significant others/family/visitors that may be actively using or derailing recovery process. Seems like most of the time when I'm 1:1 with mother she is receptive, but then family comes and she no longer cares or is influenced to behave differently/make poor decisions.

The need for more nurse training and support

The final theme reflected the nurses' need for more support when working with these patients. One nurse reflected on how she struggled with judgment:

> Dealing with my own emotions is hard, because I truly believe they deserve the best possible care, but I can't help sometimes and judge their history of substance abuse.

Others noted the lack of SUD training: "We are not addiction RNs. We are limited in our training." Nurses were also challenged to coordinate with community programs to support smooth transitions in care: "[Not knowing] full social situation and not being able to collaborate with social work and not seeing/communicating with Child Protection Services." Participants identified the need for more SUD training and resources in response to the question of what would make it easier to care for these families. For example, one respondent noted that

> More education and focused instruction regarding best practices for caring for mothers, families and infants with NAS would help to strengthen the quality of care. Also having more resources available for us to refer families and mothers to.

Additional learning needs included conflict de-escalation, boundary setting, and teaching parenting skills. Nurses desired a structured approach through guidelines and care plans that would provide consistent care and clear expectations for patients, families, and caregivers. Additional structural support would come from increased staffing levels and space for families to stay continuously with newborns with NOWS.

DISCUSSION

The purpose of this study was to explore the stigma of perinatal nurses toward OUD and NOWS during the postpartum period. Findings suggest that perinatal nurses feel stigma toward perinatal OUD and that the level of stigma correlates with compassion satisfaction and knowledge about OUD. Nurses reported a somewhat higher level of stigma on the Openings Minds Scale adapted to SUD postpartum (mean = 51.9) compared with nurses' stigma to mental illness in earlier studies (mean = 45.7).[24] The lack of difference in mean stigma scores among nurses with and without personal or family history of SUD was surprising. Modgill et al[24] found that OMS scores were lower with personal or family history of mental illness. The higher stigma scores found in the current study may be because substance use in pregnancy and postpartum bears additional stigma because of beliefs that substance use leads to fetal and neonatal harm and unfitness to parents.[31] This may be due to differences in populations studied (mental health vs SUD, and additional stigma related to parenting and SUD). The mean level of compassion satisfaction, 31.9, was within the range of 23 to 41 considered "average."[22] The mean compassion satisfaction in perinatal nurses was somewhat lower than that in oncology nurses[32] (42.4) and emergency department nurses[33] (39.8). Overall, the nurses in the current study reported relatively little training specific to substance use and mental health and low levels of knowledge on the care of postpartum women with SUD, in contrast to a recent study in the Southwest United States.[34] Previous studies have suggested that insufficient education on substance use can be a barrier to providing quality nursing care to affected families.[9,17]

Multivariate regression found that stigma, decreased years of experience in care of childbearing women and infants, and increased knowledge were significant predictors of compassion satisfaction. Although comfort in caring for postpartum women with substance use and infants at risk of NOWS was associated with compassion satisfaction, the associations became nonsignificant in multiple regression modeling, perhaps because of multicollinearity or because stigma was a much stronger predictor. Surprisingly, increased experience in care of childbearing women and infants was a significant predictor in decreasing compassion satisfaction. One possible explanation for this could be the increased risk of burnout with longevity in the profession, with mounting rather than decreasing stigma over time. These findings need to be confirmed in larger samples.

The moderately negative correlation between stigma and compassion satisfaction showed one potential mechanism for how stigma can interfere with development of a positive therapeutic relationship between nurses and postpartum women with OUD. Knaak et al[35] identified low compassion satisfaction and stigma toward opioid use as the major problems associated with the opioid epidemic among first responders in qualitative focus groups in Canada. In the current study, feeling knowledgeable about the care of postpartum women with SUD predicted compassion satisfaction. Having the necessary knowledge to effectively care for women with OUD has been identified as essential by nurses in qualitative studies.[20] The few overall hours of education or training specific to SUD and mental health and the lack of a correlation with hours trained in the current study suggest programs need to be developed that can measurably increase nurses' knowledge, reduce stigma, and ultimately increase compassion satisfaction. In a review of the literature, Smothers et al[36] found that educational interventions within undergraduate nursing programs demonstrated positive changes in students' knowledge, attitudes, and skills. There is a need to demonstrate that these interventions lead to sustainable change post-licensure and to determine how continuing nursing education programs can be utilized to reinforce and refine nurses' ability to provide quality care to childbearing families affected by substance use. Improved clinical outcomes and patient satisfaction should also be included as outcome measures for monitoring the effectiveness of these programs to improve care.

The inclusion of open-ended questions enabled a deeper understanding of nurses' attitudes toward the care of women and infants affected by OUD. Mistrust between nurses and postpartum women, difficult behaviors, and judgments were identified as barriers to effective care. Additional support for mothers and nurses and increased training and resources were presented as strategies to improve caregiving for this population. Previous studies have also identified the importance of building trust between mothers with SUD and neonatal intensive care unit nurses[6,11] as well as maternity nurses[9] to provide optimal care. The identification of patients' unmet needs and chaotic social circumstances by some participants showed an openness to understand substance use in the contexts of adversity, poverty, social inequity, and marginalization.[37]

Study findings have the potential to inform strategies to improve the therapeutic relationship between nurses and postpartum patients with OUD and foster engagement of postpartum patients in the care of infants with NOWS. The inverse relationship between stigma and compassion satisfaction suggests that decreasing stigma may increase compassion satisfaction in nurses and improve therapeutic relationships and cultural safety for patients with SUD in the hospital environment.[38] In addition to increasing knowledge about SUD, nurses may benefit from mindfulness-based programs to reduce

burnout,[39] education on how to respond effectively to stigma and biased communication in peers,[40] and resources and standardized guidelines to help nurses provide care without bias, judgment, and stigma.

Further research is necessary to confirm findings across multiple institutions in a larger sample size. Measurement of the institutional environment, culture of care, and racial bias may provide a more complete understanding of nursing attitudes about perinatal OUD. Experimental studies should be conducted to test interventions to decrease stigma and improve nurse-family therapeutic relationships and improve parent engagement in newborn care.

There are limits to the generalizability of the findings because participants were limited to a single institution, identified exclusively as female, and racial and ethnic identities were not asked. There is the possibility of selection bias in those who responded to this optional survey. It is also possible social desirability may have influenced some participants' responses. The adaptation of the OMS and ProQol scales to the care of postpartum women with SUD has not been previously validated, although the internal reliabilities in the current study are reassuring. Qualitative responses were limited in length and lacked the exploration inherent in in-depth interviews. As the data in the current study were cross-sectional, no inferences about causation should be assumed. The lack of a significant correlation among hours of training and stigma or compassion could have resulted from the limited range in the scale to measure hours of training. Compassion satisfaction, as only one component of compassion fatigue, may yield an incomplete understanding of how stigma and knowledge contribute to nursing care for families with OUD.

CONCLUSION

Perinatal nurses' stigma toward perinatal OUD was negatively correlated with compassion satisfaction, feeling knowledgeable about OUD, and comfort in providing care. Nurses identified defensiveness, lack of trust, and inadequate social support as key challenges for perinatal patients with OUD. Nurses suggested more support for mothers and nurses, increased nursing education, and clinical guidelines to foster therapeutic relationships and improve clinical outcomes.

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