UC Davis
UC Davis Previously Published Works

Title

Patient-Provider Trust as a Key Component of Prenatal Screening for Adverse Childhood Experiences (ACES): A Concept Analysis

Permalink

https://escholarship.org/uc/item/51k397f3

Authors

Gilliland, Paige D
Phipps, Jennifer E
Derret, Breän
et al.

Publication Date

2024-06-30

DOI

10.1111/jmwh.13660

Copyright Information

This work is made available under the terms of a Creative Commons Attribution-NoDerivatives License, available at https://creativecommons.org/licenses/by-nd/4.0/

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

Journal of Midwifery & Women's Health www.jmwh.org

Review

Patient-Provider Trust as a Key Component of Prenatal Screening for Adverse Childhood Experiences (ACES): A Concept Analysis

Paige D. Gilliland[1], BS, Jennifer E. Phipps[1], PhD, Breän Derret[1], MD, Indira D'Souza[1], BS, Stephanie Ha[1], BS, Shwetha Patil[1], BS, Leigh Ann Simmons[1], PhD, MFT

Introduction: The concept of patient-provider trust in prenatal adverse childhood experiences (ACEs) screening remains unexplored. This concept analysis illuminates the role of trust in prenatal ACE screening to improve patient-provider relationships, increase patient uptake of ACE screening, and ensure that ACE screening is implemented in a strengths-based, trauma-informed way.

Methods: A concept analysis was conducted using the Rodgers' evolutionary method to define the antecedents, attributes, and consequences of this construct. The databases searched were PubMed, PsychInfo, and Scopus between 2010 and 2021. A total of 389 articles were retrieved using the search terms *prenatal, adverse childhood experiences screening, adverse childhood experiences*, and *adverse childhood experiences questionnaire*. Included articles for detailed review contained prenatal screening, trauma screening (ACE or other), trust or building trust between patient and health care provider, patient engagement, and shared decision making. Excluded articles were those not in the context of prenatal care and that were exclusively about screening with no discussion about the patient-provider relationship or patient perspectives. A total of 32 articles were reviewed for this concept analysis.

Results: We define trust in prenatal ACE screening as a network of evidence-based attributes that include the timing of the screening, patient familiarity with the health care provider, cultural competence, demystifying trauma, open dialogue between the patient and health care provider, and patient comfort and respect.

Discussion: This concept analysis elucidates the importance of ACE screening and provides suggestions for establishing trust in the context of prenatal ACE screening. Results give insight and general guidance for health care providers looking to implement ACE screening in a trauma-informed way. Further research is needed to evaluate pregnant patients' attitudes toward ACE screening and how a health care provider's trauma history might influence their care. More inquiry is needed to understand the racial, ethnic, and cultural barriers to ACE screening.
J Midwifery Womens Health 2024;0:1 © 2024 The Author(s). Journal of Midwifery & Women's Health published by Wiley Periodicals LLC on behalf of American College of Nurse Midwives (ACNM).

Keywords: adverse childhood experiences (ACEs), birth outcomes, holistic midwifery practice, patient-provider relationships, prenatal care, screening, trust

INTRODUCTION

A vast body of literature demonstrates that exposure to adverse childhood experiences (ACEs) increases risk for poor health outcomes in adulthood. As seen in Table 1, the ACE screening tool assesses early life experiences of physical abuse, sexual abuse, emotional abuse, parental incarceration, parental mental health, parental divorce or separation, intimate partner violence exposure, physical neglect, and emotional neglect prior to 18 years of age.[1–4]

Other possible ACEs have been identified but not yet included in the screening tool.[5–6] These factors have been labeled, "expanded ACEs", and include bullying, community violence, living in foster care, racism, and neighborhood safety.[6] The ACE screening tool was designed to quantify early life experience; therefore, each question is answered either yes (score of 1) or no (score of 0) and an ACE score can be summed from each completed screening tool.[1] The screening tool can also be used to identify the specific traumas that someone has experienced, which can help health care providers evaluate the impact of these traumas within the context of the score.

Studies show that pregnant people who have experienced ACEs have disproportionately high levels of infant and maternal morbidity and mortality, leading experts to recommend universal ACE screening prenatally to mitigate poor pregnancy outcomes and the intergenerational transmission of ACEs.[7,8] Currently, the American College of Obstetricians and Gynecologists recommends that prenatal care providers screen for current and past traumas as part of their trauma-informed care practices.[8,9] According to the ACEs Aware Quarterly Progress Report from August 2023, Medicaid clinicians in California conducted more than 1,803,100 ACE screenings.[10] One of the barriers to screening may be patient-provider trust, and that lack of trust might impact the frequency and efficacy of screening in prenatal care.

[1]University of California, Davis, Department of Human Ecology, Perinatal Origins of Disparities Center, Davis, California

Correspondence
Paige D. Gilliland
Email: pdgilliland@ucdavis.edu

ORCID
Paige D. Gilliland https://orcid.org/0009-0001-2197-626X
Leigh Ann Simmons https://orcid.org/0000-0001-9400-5723

1526-9523/09/$36.00 doi:10.1111/jmwh.13660

© 2024 The Author(s). Journal of Midwifery & Women's Health published by Wiley Periodicals LLC on behalf of American College of Nurse Midwives (ACNM).
This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

Quick Points

- ✦ Patient-provider trust, in the context of prenatal care, has not been examined with an understanding of adverse childhood experiences and their effect on pregnancy and birth outcomes.
- ✦ Understanding how to promote patient-provider trust in this context can provide health care providers more confidence in screening for ACEs and addressing trauma during pregnancy.
- ✦ Expanding research around prenatal ACE screening and the impacts of ACEs on maternal and infant health may improve prenatal care, perinatal outcomes, and increase ACE awareness in this population.
- ✦ With a working definition of patient-provider trust in prenatal ACE screening, health care providers may use these attributes to improve their usage of ACE screening in prenatal care.

The Significance of ACEs in Pregnancy, Fetal Development, and Early Infancy

The Effects of ACEs on Pregnancy and Birth Outcomes

Many studies have demonstrated a link between ACEs and poor birth outcomes or perinatal complications.[11–14] One study showed that having 4 or more ACEs was associated with a 2-fold increase in biomedical risk during pregnancy (eg, prenatal and perinatal complications), such as hypertension, loss of fetal movement, and low birthweight.[11] This same study also found a 5-fold increase in psychosocial risks, such as being a single parent, teenage pregnancy, and low family income, compared with those who reported experiencing no ACEs, suggesting a dose-response relationship.[11] A greater number of ACEs was also indirectly associated with infant health problems through cumulative biomedical risk but not psychosocial risk, and higher ACEs were indirectly associated with infant emotional issues through psychosocial risk but not biomedical risk.[11] These 2 intermediary mechanisms demonstrate the complexity with which maternal ACEs impact infant health and development. Other studies have shown that an increase in a person's ACE score is associated with preterm birth, especially for Black mother-Black father couples, who are twice as likely to have preterm labor than White mother-White father couples.[14] Having early life adversity cumulatively and negatively impacts pregnancy and birth outcomes; these risk factors could be mitigated through ACE screening, which would enable health care providers to understand these risks and tailor care and support appropriately.

The Intergenerational Transmission of ACEs

Having a high ACE score does not exclusively impact pregnancy and birth outcomes. Like many environmental factors, ACEs can be passed down generation after generation. Intergenerational transmission is defined as the transference of environmental adversity through direct exposure to the pregnant parent and subsequently to the fetus.[15,16] The intergenerational transmission of ACEs is particularly preventable during pregnancy, as one study concluded that pregnancy is where this transmission begins.[17] For example, associations between maternal ACEs and poor antepartum health outcomes have been found including preeclampsia, short gestational age, and gestational diabetes.[17] However, social support including tangible support, affective support, interactive support, and emotional or informational support all have been found to moderate antepartum health risk.[17] Toxic stress co-occurring with ACEs has deleterious effects on the social-emotional development of infants through repeated and prolonged activation of the stress response.[13–15]

Critical periods throughout gestation, such as the embryonic period, bring awareness to the effects of environmental stressors on gene expression and physiology throughout pregnancy.[15] For example, recent studies have shown changes in brain electrical activity detected with electroencephalography in infants as early as 2 months old who were exposed to maternal psychosocial stress during pregnancy.[15,18] These findings suggest that infants with mothers experiencing high levels of perceived stress in the postnatal period had lower levels of high-frequency spectral power, potentially influencing learning and behavior.[18] Maternal ACEs are directly associated with pregnancy psychosocial risk and antepartum health risk, and indirectly associated with maternal hostile behavior, anomalous parenting, postpartum psychosocial risk, and poor infant health all which impact infant milestones (ie, fine motor, communication, gross motor, etc).[17,19]

ACE Screening as a Preventive Tool in the Prenatal Setting

Although ACEs can impact prenatal risk factors, birth outcomes, and infant development, simply having a history of ACEs does not mean there will be permanent, irreparable consequences.[20] There are many buffers that have been shown to moderate the relationships between ACEs and maternal health and well-being. For example, social support has been shown to have positive effects on stress during pregnancy and to reduce the incidence of postpartum depression for individuals with ACEs.[20,21] New literature examining benevolent childhood experiences as buffers for ACEs has also demonstrated that the impacts of ACEs on pregnancy can be offset by highlighting positive early childhood experiences.[7] Researchers highlight the need for more intervention programs early in pregnancy to introduce these buffers as soon as possible.[7,19,20,22] Particularly, there is a need for programs that can improve the identification of risk factors before and after pregnancy to supply parents with more personalized perinatal care.[15,20]

Given the critical importance of addressing ACEs to improve pregnancy-associated outcomes and given that ACE

15422011, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jmwh.13660, Wiley Online Library on [17/07/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Table 1. Childhood Exposure to Abuse and Household Dysfunction
Abuse by Category
Psychological
Did a parent or other adult in the household…
Often or very often swear at, insult, or put you down?
Often or very often act in a way that made you afraid that you would be physically hurt?
Physical
Did a parent or other adult in the household…
Often or very often push, grab, shove, or slap you?
Often or very often hit you so hard that you had marks or were injured?
Sexual
Did an adult or person at least 5 years older ever…
Touch or fondle you in a sexual way?
Have you touch their body in a sexual way?
Attempt oral, anal, or vaginal intercourse with you?
Actually have oral, anal, or vaginal intercourse with you?
Household Dysfunction By Category
Substance abuse
Live with anyone who was a problem drinker or alcoholic?
Live with anyone who used street drugs?
Mental illness
Was a household member depression or mentally ill?
Did a household member attempt suicide?
Mother treated violently
Was your mother (or stepmother)…
Sometimes, often, or very often pushed, grabbed, slapped, or had something thrown at her?
Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard?
Ever repeatedly hit over at least a few minutes?
Ever threatened with, or hurt by, a knife or gun?
Criminal behavior in the household
Did a household member go to prison?

Source: Reprinted from Felitti et al, 1998 (no permission needed).[4]

screening is still limited in prenatal care, the purpose of this review is to better elucidate patient-provider trust as a key component of successful ACE screening. To achieve this goal, we conducted a concept analysis to define how, and in what contexts, patient-provider trust in ACE screening is achieved to better educate health care providers on the importance of trust in ACEs screening, referrals, and prenatal care. Specifically, we sought to answer the following questions: What are the definitions of patient-provider trust in the current literature and how might they apply to prenatal ACE screening? How might patient-provider trust impact the successful integration of prenatal ACE screening? What are the characteristics of a safe and healthy clinical encounter for pregnant people with high ACE scores?

METHODS

A concept analysis focuses on the current use of a concept along with its hidden attributes in order to better understand its applications in different contexts.[23] For this concept analysis, we used Rodgers' evolutionary method.[23] A concept is a cluster of attributes, and uncovering those attributes allows researchers to come to a consensus.[23] This article relies on rigorous analysis and inductive inquiry through (1) identifying trust as the concept of interest, (2) identifying and selecting an appropriate setting, (3) collecting relevant data, (4) analyzing literature based on characteristics of the concept, (5) identifying a model of the concept, and (6) identifying further implications for the concept.[23] It is possible that the concept being studied is also expressed using different words, otherwise known as surrogate terms.[23]

We conducted a librarian-assisted search using the following databases: PubMed, PsychInfo, and Scopus. Search terms included the headings *prenatal, adverse childhood experiences screening, adverse childhood experiences*, and *adverse childhood experiences questionnaire*. The dates included in this systematic search were between 2010 and 2021 to gather a wide range of articles, and trust was not included as a search term because there were no studies explicitly evaluating trust in prenatal ACE screening. Our inclusion criteria specifically included articles relating to patient-provider trust as many of the articles had patient-provider reports relating to this concept. After the initial search, all articles from the 3 databases were downloaded into Covidence for review. In total, 6 people reviewed titles, abstracts, and full texts for inclusion. (See Figure 1). Conflicts were re-reviewed, and all 6 reviewers voted on whether to include or exclude the source. For the title and abstract portion of the systematic search process we excluded articles that: (1) were not in the context of prenatal care; and (2) lacked information about the patient-client relationship. For the full text portion of the systematic search, we excluded articles that (1) did not include prenatal care; and (2) included screening but did not talk about trust or patient-client relationship. Our inclusion criteria were that the articles: (1) were in the context of prenatal care; (2) implemented trauma screening (ACEs or other); (3) included trust or themes surrounding patient-provider relationships; (4) included patient engagement; and (5) addressed shared decision making. No specific methodologies (eg, qualitative, or quantitative) were included or excluded.

FINDINGS

Using the Rodgers and Knafl analysis method, a total of 389 articles were retrieved from the databases during the initial search and titles and abstracts were reviewed.[23] Of these articles, 202 were removed as duplicates, leaving 187 after deduplication. During the abstract and title portion of the screening, 42 articles were included, and 145 articles were excluded. Finally, the full texts of 42 articles were reviewed, and 32 articles were included based on inclusion and exclusion criteria (Figure 1). Data abstracted from the articles included (1)

15422011, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jmwh.13660, Wiley Online Library on [17/07/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

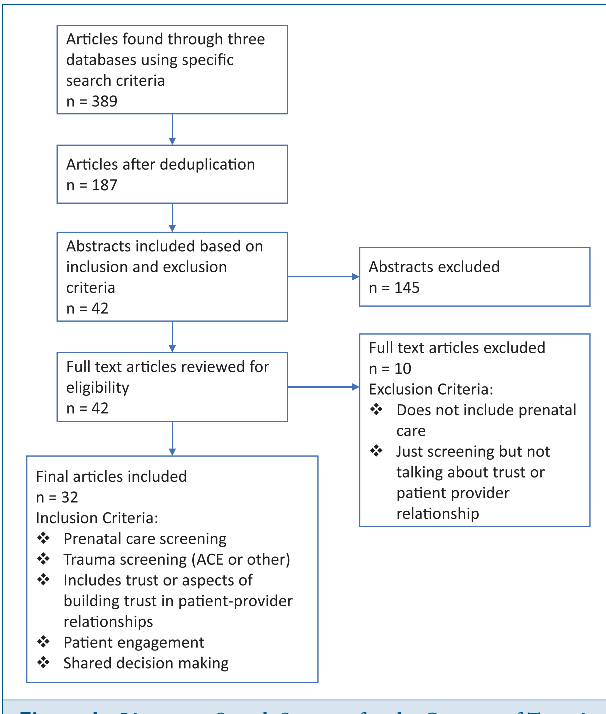

Figure 1. Literature Search Strategy for the Concept of Trust in Prenatal ACEs Screening

Abbreviation: ACE, adverse childhood experience.

how patients reported feeling during ACE screening in prenatal care; (2) health care providers' feelings and attitudes toward ACE screening to identify factors needed to establish patient-provider trust; and (3) research methods used, including attrition rates in specific populations, unique ways of explaining ACEs, screening practices, and overall patient satisfaction with ACE screening. Each criterion helped us gather patient-provider testimonies and study findings from the included articles which together were organized by shared themes. These shared themes became the attributes, antecedents, and consequences and were defined based on their categorized characteristics.[23] The labels given for each attribute were created by evaluating each of the shared themes and their connection to the concept of trust in prenatal ACE screening.

Attributes

The Timing of Screening

One attribute of trust that both patients and health care providers identified as especially important was the timing of ACE screening.[5,24] In one example, during a provider focus group, medical assistants and health care providers both felt that administering the ACE screener after a few appointments was easier because there was more rapport and trust.[5,25] In the same study, pregnant participants were screened for ACEs prenatally by either a medical assistant (Site A) or a department manager (Site B) and were asked a series of questions regarding the experience.[5] One question asked, "Did the conversation about your childhood experiences increase trust in your clinician?"; 53% of respondents said yes and the other 47% said no.[5] These proportions remained consistent regardless of how many ACEs the respondent had. Nearly half of the respondents reported that screening had not increased trust in their health care providers. Olsen et al underscored this finding by stating that most people prefer screening to take place after a few prenatal visits when more trust is built.[24] The attribute of timing has to do not only with a patient's relationship with their health care provider, but also getting used to prenatal visits, being pregnant, and knowing what to expect in upcoming appointments. Alongside administering the screener after multiple prenatal visits, researchers suggested that it may be helpful to set the stage for screening by explaining the ACE screening tool throughout the first few appointments so that the patient has sufficient time to consider it.[24]

Patient Familiarity With Provider

In addition to timing, the patient's familiarity with their health care provider was defined as an attribute of trust. Both patients and health care providers report that a trusting patient-provider relationship needs to precede any discussion about childhood trauma. Alienating the pregnant patient and making them feel as if the trauma screening process is about their unborn fetus and not them as an individual increased feelings of distrust with caregivers.[24] This alienation could be remedied with the development of a patient-provider relationship because the health care provider would have put effort into getting to know the patient and would have already established precedent that the appointments are about the patient and their lived experience. One study examining the patient's perspective on prenatal ACE screening found that women largely preferred their midwife or physician caregiver to administer the ACE screener (n = 110; 80.3%) rather than a clinic nurse, mental health professional, home visiting public health nurse, social worker, medical assistant, or dietician at health department.[24]

Cultural Competence

Cultural competence is defined as a set of behaviors, policies, and attitudes that together enable high quality care across disciplines.[26] One of the principles of cultural competence is recognizing the complexities in language interpretation.[26] Cultural competence was identified as an attribute of trust in an article examining Micronesian Islander communities where there is no word for trauma or ACEs. Specifically within this community, there is heavy reliance on midwives and local medicines, and a distrust of Western prenatal care.[27] One antecedent to cultural competence was defined as supportive statements such as, "Would it help if I said it in your language?", "Is there an equivalent word or phrase in your language?", and "How would you say it in your language?."[27] All of these statements were found to be effective in helping patients feel more understood and respected by their health care staff.[27] Not only do these phrases work in practice, but they are also part of the key principles of cultural competence, most notably how language can be interpreted across cultures. This may be true for other underrepresented and underserved populations where language barriers may be present.

15422011, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jmwh.13660, Wiley Online Library on [17/07/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Demystifying Trauma

Pregnancy can be a traumagenic experience, especially with childhood sexual abuse survivors who report increased triggers and flashbacks during pregnancy.[28,29] Demystifying childhood trauma with pregnant patients removes stigma and helps patients to understand that what happened to them is not their fault. One study emphasized the importance of reducing guilt and shame by clearly defining mental illness, trauma, or other stigmatized issues in a trauma-informed way.[13] Olsen noted that many abuse survivors felt that a clear explanation for the purpose of ACE screening in maternal care was important to trusting their health care provider.[30] The literature also demonstrates the consistent need for reassurance, understanding, and kindness during prenatal care appointments. Specifically, health care providers must approach each patient as if they have experienced trauma in an effort to demystify it.[28] Many scholars have underscored this need for sensitivity and the importance of staying calm, kind, and caring to avoid retraumatization.[24,28]

Open Dialogue Between Patient and Provider

The attribute of open dialogue between the patient and the health care provider was identified in multiple sources as being an important stepping stone in building a trusting patient-provider relationship. Flanagan et al found that simply talking about ACEs made patients feel that their health care provider knew them better and increased their trust.[5] One study evaluating low-value, unscheduled hospital visits in pregnant people found that during pregnancy, high utilizers of low-value, unscheduled hospital visits were often triggered by their ACEs, and they were more likely to share narratives of distrust with their provider.[31] The authors proposed the need for open dialogue between patient and provider, including asking patients about their trauma and offering the opportunity to discuss it in the context of their prenatal care.[24,31] One study reiterated this by demonstrating that the inability to discuss trauma during prenatal care appointments increased dissatisfaction with health care providers.[29] The simple act of offering patients the opportunity to share their early experience was found to be deeply important to creating a trusting relationship.

Privacy and Patient Comfort

The attribute of privacy and patient comfort was identified in much of the literature. For example, patients have reported wanting to feel like they can decline ACE screenings.[24] In one study, patients strongly preferred to be screened by a physician or midwife (n = 110; 80%), in an examination room (n = 113; 83%), and using a paper questionnaire (n = 88; 64%).[24] They also thought that the location of screening needed to be private and nonthreatening with no locking doors.[24] In the same study, 80% of respondents believed that health care providers should ask permission before recording their ACE score in their health record.[24] Overall, one of the most common phrases from patients in this study was that the trauma was not their fault, demonstrating the importance of reassuring patients that they are not responsible for their score.[24] Patients wanted to feel respected, heard, and autonomous in their decision to share their early trauma, especially surrounding childhood sexual abuse.[29]

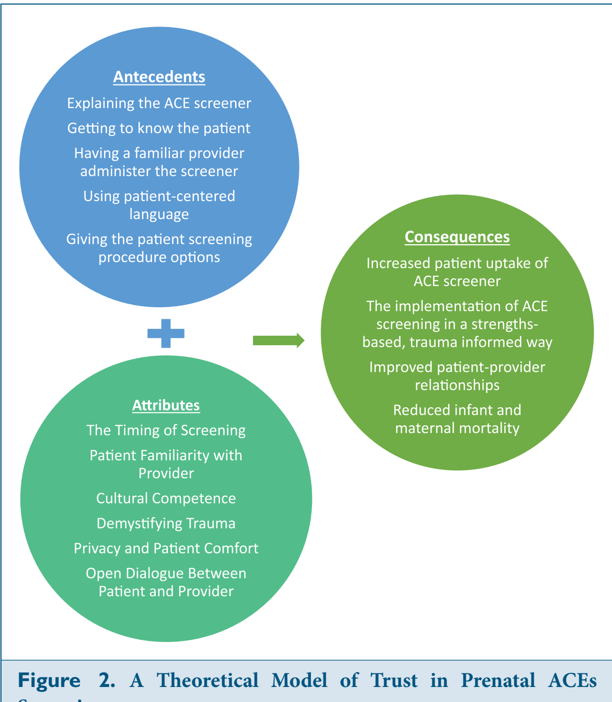

Figure 2. A Theoretical Model of Trust in Prenatal ACEs Screening

Abbreviation: ACE, adverse childhood experience.

Antecedents

As stated above, a concept is a cluster of attributes which make up the concept and may differ depending on the context. Alongside attributes, antecedents occur before the concept. In this concept analysis, one antecedent to trust in prenatal ACE screening is the patient being offered the opportunity to discuss their trauma history.[24,29,31] Other antecedents in this analysis include explaining ACEs, getting to know the patient, having a familiar provider administer the screener, using supportive statements or patient-centered language, and giving the patient screening procedure options (ie, no closing doors or using a paper questionnaire). Each of these antecedents works to create a complex network of evidence-based attributes that can better inform prenatal ACE screening.

Consequences

The most common consequence stated in the literature for the improvement of prenatal ACE screening was the betterment of holistic care and the reduction of adverse birth outcomes. Rodgers explained the importance of defining the implications and consequences in concept analyses in order to inspire further inquiry and improve care.[23] One way to do this is through the development of a model case, which allows readers to see how defined attributes contribute to achieving trust in this context. Rodgers also stated that model cases allow the analyst to detangle what the features of the attribute are and how it can be used correctly in practice.[23] See Figure 2 for a theoretical model of trust in prenatal ACE screening demon-

15422011, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jmwh.13660, Wiley Online Library on [17/07/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

strating how the attributes and antecedents of trust work together in tandem to establish trust in this setting.

Contextual Application: A Model Case

This model case was developed as an example of strategies to establish trust in prenatal ACE screening using the defined attributes, antecedents, and consequences. This case is specific to clinical care so that it might be used as a case study for training in trauma-informed care. A Latiné 27-year-old patient is pregnant with their first child, has a history of ACEs, and has limited English proficiency. They have attended multiple introductory prenatal appointments with their health care provider who speaks Spanish and shares their ethnicity. Throughout these visits, their provider talked about ACEs and explained what the ACE screener was in Spanish, their native language. The provider offered the patient the chance to take the screener after multiple appointments and after explaining the screener in detail. The provider also asked the patient for permission before recording their ACE score in their medical chart and explained its confidentiality. The patient has an ACE score of 4 with a history of childhood sexual abuse. With their specific trauma in mind, the health care provider walked the patient through each physical examination using patient-centered language. They explained that their trauma is not their fault and does not determine their competency as a parent. The pregnant patient completed the ACE screening, felt comfortable at later appointments, and attended all later scheduled appointments with this provider. The patient was able to discuss their early experiences and was referred to outside services for additional support throughout and after their pregnancy. The patient had a healthy birth with no complications.

DISCUSSION

Using Rodgers' evolutionary method,[23] we defined the attributes, antecedents, and consequences of patient-provider trust in ACE screening to elucidate how this trust is achieved and to therefore better inform pregnancy care practices. There is a lack of continuity in the operational definition of early life trauma in obstetrics and midwifery.[30] For example, some studies classify trauma using the Childhood Trauma Questionnaire and not the ACE screener, or they use both adult and childhood traumatic experiences, which can make it difficult to find the best clinical intervention methods for specific populations.[30] Using the defined attributes and antecedents of trust in prenatal ACE screenings, we developed an evolving conceptual definition. Trust in prenatal ACE screening is a multidimensional process in which prenatal care providers provide adequate time for the patient to become familiar with the provider, communicate that the appointments are patient-centered, establish cultural competency, demystify trauma, provide open dialogue with the patient, and ensure patient privacy, confidentiality, and comfort. Further inquiry is needed to identify more attributes of trust with different clinical populations and with different screening practices. Additionally, more studies should investigate how a health care provider's trauma history, pregnancy experiences, and early life experiences might inform their care, administration of the ACE screener, and response to results.

Making ACE Screening Actionable and Manageable for Health Care Providers

As prenatal ACE screening becomes more frequent, it is critical that health care providers feel prepared, adequately trained, and supported in doing so.[8] Some of the reasons providers may feel overwhelmed by ACE screening include lack of skills, knowledge, time, reimbursement, or substantial resources to provide the patient after screening.[8,25] Currently, the state of California does reimburse health care providers for conducting ACE screening with both children and adults.[32] Having the ACE screener as part of electronic health records could also alleviate provider burden and make the process more streamlined. Johnson et al also explained that providing prenatal health care in and of itself can be a source of traumatic stress for providers.[25] Depending on a health care provider's own trauma and history, discussing these topics with patients could be potentially triggering, leading to compassion fatigue or burnout.[28] Therefore, the culture of the organization providing prenatal care needs to be sufficiently resourced to enable midwives and obstetricians to seek support from mental health professionals.[25,28] Understanding trauma not only impacts health outcomes, but also affects the way health care providers approach childhood trauma within the context of prenatal care.

Trauma-Informed Care as Holistic Midwifery Practice

One of the 6 key principles within the overarching mandate for a trauma-informed approach is trustworthiness and transparency.[28] This concept analysis outlines how this principle can be better achieved in the context of perinatal care. Using trauma-informed care perinatally is essential due to the potential nature of care including breast, chest, or pelvic examinations.[33] Helpful guidance on the use of trauma-informed care can include statements communicating to the patient that having a trauma history is very common and communicating that patients are in control by allowing for flexibility in the timing of screening as defined in the above attribute.[33] Because early prenatal visits occur only every 4 weeks, patients may not feel a connection with their health care provider for some time. This can make screening after what feels to the patient like multiple introductory appointments more difficult. Additionally, many practices have pregnant patients see multiple health care providers so that they meet each provider who may ultimately attend their birth. This practice may not be consistent with conducting ACE screening using the recommended practices outlined in this article.

Other Considerations Regarding ACE Screening

Although the literature on ACE screening frequently uses the total score as the indicator for poor health outcomes, a person's total ACE score is not necessarily sufficient to guide referrals and support services. Some people may have a low ACE score, but the specific traumas may have a very high impact

15422011, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jmwh.13660, Wiley Online Library on [17/07/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

(eg, childhood sexual abuse). Likewise, someone may have a very high ACE score, but the impact may be relatively low given the nature of the specific traumas or life course history in adulthood.

Black individuals, Indigenous individuals, and other people of color are exposed to more trauma compared with their White or socioeconomically advantaged counterparts.[8] Issues such as unconscious bias, racism, and discrimination in prenatal care cannot be remedied solely with the use of the ACE screening tool.[8] More research is needed to examine the impact of cultural competence on trust within different ethnicities and cultures. Unfortunately, much of the literature about prenatal ACE screening lacks discussion surrounding racial, ethnic, and cultural barriers. There is literature about racial and ethnic differences in birth and pregnancy outcomes or ACE prevalence but rarely on the screening process.

Strengths and Limitations

This concept analysis has some strengths and limitations. One strength is that the studies included represent a variety of experiences of ACE screening, ranging from high utilizers of low-value unscheduled hospital visits to Micronesian Islander communities. This variety allows for greater generalizability for all people seeking prenatal care. Another strength is that we have developed an operational definition of trust in prenatal ACE screening that can be utilized and refined in future research. A limitation of this analysis was that our search included the years 2010 to 2021. However, we conducted a rapid review of the literature in 2022 to 2023 and did not identify additional relevant papers.

CONCLUSION

This concept analysis defines the attributes, antecedents, and consequences of patient-provider trust in prenatal ACE screening. It elucidates the impacts of ACEs on pregnancy and birth outcomes, the importance of screening, and possible approaches to establish patient-provider trust in the context of prenatal ACE screening through attributes and antecedents found in the current literature. Perinatal care providers need not wait for system-wide change, but instead incorporate patient trauma history into their care now.[8] Much of the current literature emphasizes the importance of clinical interventions aimed at improving labor and birth outcomes, promoting resilience, and focusing on both parents to mediate ACEs.[3,34–36] Throughout pregnancy a person is often receiving sustained and recurrent contact with their health care provider, creating the ideal opportunity for risk assessment and intervention implementation.[30] Pregnancy influences health-changing behaviors, and at the core of those changes is the need for trust between the patient and health care provider.[30] Prenatal ACE screening is one of many steps that could be taken to buffer the impact of ACEs on maternal health and well-being and improve pregnancy and birth outcomes, especially in the highest risk populations.

ACKNOWLEDGMENTS

This research was supported in part by the Hatch Project no. CA-D-HCE-2582-H, Addressing Multifactorial Influences on Pregnancy Outcomes to Promote Health Equity and the Trauma-Informed Network of Care Implementation in Yolo County, California: A Community-Academic Partnership to Build Resilience.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

REFERENCES

1. Nidey N, Bowers K, Ammerman RT, et al. Combinations of adverse childhood events and risk of postpartum depression among mothers enrolled in a home visiting program. *Ann Epidemiol*. 2020;52:26-34. doi:10.1016/j.annepidem.2020.09.015
2. Racine N, Devereaux C, Cooke JE, Eirich R, Zhu J, Madigan S. Adverse childhood experiences and maternal anxiety and depression: a meta-analysis. *BMC Psychiatry*. 2021;21(1):28. doi:10.1186/s12888-020-03017-w
3. Scrafford KE, Grein K, Miller-Graff LE. Effects of intimate partner violence, mental health, and relational resilience on perinatal health. *J Trauma Stress*. 2019;32(4):506-515. doi:10.1002/jts.22414
4. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *Am J Prev Med*. 1998;14(4):245–258. doi:10.1016/S0749-3797(98)00017-8
5. Flanagan T, Alabaster A, McCaw B, Stoller N, Watson C, Young-Wolff KC. Feasibility and acceptability of screening for adverse childhood experiences in prenatal care. *J Womens Health (Larchmt)*. 2018;27(7):903-911. doi:10.1089/jwh.2017.6649
6. Cronholm PF, Forke CM, Wade R, et al. Adverse childhood experiences: expanding the concept of adversity. *Am J Prev Med*. 2015;49(3):354-361. doi:10.1016/j.amepre.2015.02.001
7. Narayan AJ, Rivera LM, Bernstein RE, Harris WW, Lieberman AF. Positive childhood experiences predict less psychopathology and stress in pregnant women with childhood adversity: a pilot study of the benevolent childhood experiences (BCEs) scale. *Child Abuse Negl*. 2018;78:19-30. doi:10.1016/j.chiabu.2017.09.022
8. Johnson S, Kasparian NA, Cullum AS, et al. Addressing adverse childhood and adult experiences during prenatal care. *Obstet Gynecol*. 2023;141(6):1072. doi:10.1097/AOG.0000000000005199
9. Caring for patients who have experienced trauma: ACOG Committee opinion, number 825. *Obstet Gynecol*. 2021;137(4):e94-e99. doi:10.1097/AOG.0000000000004326
10. ACEs Aware. *Quarterly Progress Report: ACE Screening and Clinician Training Data; August 2023*. California Department of Healthcare Services; 2023. Accessed February 2024. https://www.acesaware.org/wp-content/uploads/2023/08/ADA_Aug_2023_Quarterly_Progress_Report_08152023.pdf
11. Madigan S, Wade M, Plamondon A, Maguire JL, Jenkins JM. Maternal adverse childhood experience and infant health: biomedical and psychosocial risks as intermediary mechanisms. *J Pediatr*. 2017;187:282-289.e1. doi:10.1016/j.jpeds.2017.04.052
12. Racine N, Madigan S, Plamondon A, Hetherington E, McDonald S, Tough S. Maternal psychosocial risk profiles in pregnancy: associations with postpartum maternal health and child outcomes. *Clin Psychol Sci*. 2018;6(6):783-796. doi:10.1177/2167702618788863
13. Rafferty J, Mattson G, Earls MF, et al. Incorporating recognition and management of perinatal depression into pediatric practice. *Pediatrics*. 2019;143(1):e20183260. doi:10.1542/peds.2018-3259
14. Giurgescu C, Misra DP. Psychosocial factors and preterm birth among Black mothers and fathers. *MCN Am J Matern Child Nurs*. 2018;43(5):245-251. doi:10.1097/NMC.0000000000000458
15. Barrero-Castillero A, Morton SU, Nelson CA, Smith VC. Psychosocial stress and adversity: effects from the perinatal period to adulthood. *Neoreviews*. 2019;20(12):e686-e696. doi:10.1542/neo.20-12-e686

15422011, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jmwh.13660, Wiley Online Library on [17/07/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

16. Imran N, Liaqat S, Bodla ZH, Zeshan M, Naveed S. Impact of adverse childhood experiences on the mother-infant social-emotional well-being in low and middle-income countries. *Psychiatr Ann*. 2021;51(7):316-321. doi:10.3928/00485713-20210609-01
17. Racine N, Plamondon A, Madigan S, McDonald S, Tough S. Maternal adverse childhood experiences and infant development. *Pediatrics*. 2018;141(4):e20172495. doi:10.1542/peds.2017-2495
18. Pierce LJ, Thompson BL, Gharib A, et al. Association of perceived maternal stress during the perinatal period with electroencephalography patterns in 2-month-old infants. *JAMA Pediatr*. 2019;173(6):561-570. doi:10.1001/jamapediatrics.2019.0492
19. Anastas JW, Payne NA, Ghuman SA. Adverse childhood experiences and complex post-traumatic stress in pregnant teens: a pilot study. *Matern Child Health J*. 2021;25(5):741-750. doi:10.1007/s10995-020-03041-y
20. Racine N, Madigan S, Plamondon A, Hetherington E, McDonald S, Tough S. Maternal adverse childhood experiences and antepartum risks: the moderating role of social support. *Arch Womens Ment Health*. 2018;21(6):663-670. doi:10.1007/s00737-018-0826-1
21. Benzies KM, Gasperowicz M, Afzal A, Loewen M. Welcome to Parenthood is associated with reduction of postnatal depressive symptoms during the transition from pregnancy to 6 months postpartum in a community sample: a longitudinal evaluation. *Arch Womens Ment Health*. 2021;24(3):493-501. doi:10.1007/s00737-020-01083-3
22. Howell KH, Miller-Graff LE, Schaefer LM, Scrafford KE. Relational resilience as a potential mediator between adverse childhood experiences and prenatal depression. *J Health Psychol*. 2020;25(4):545-557. doi:10.1177/1359105317723450
23. Rodgers BL. Concept analysis: an evolutionary view. In: Rodgers BL, Knafl KA, eds. *Concept Development in Nursing: Foundations, Techniques, and Applications*. 2nd ed. WB Saunders; 2000.
24. Olsen JM, Galloway EG, Guthman PL. Exploring women's perspectives on prenatal screening for adverse childhood experiences. *Public Health Nurs*. 2021;38(6):997-1008. doi:10.1111/phn.12956
25. Sciolla AF. Screening for childhood adversities in prenatal care: what works and why. *J Womens Health (Larchmt)*. 2018;27(7):854-855. doi:10.1089/jwh.2018.6995
26. Cultural competence in health and human services. Centers for Disease Control and Prevention website. Updated February 23, 2024. Accessed August 25, 2023. https://npin.cdc.gov/pages/cultural-competence
27. Nguyen-Truong CKY, Leung J, Micky K, Nevers JI. Building safe didactic dialogues for action model: mobilizing community with Micronesian islanders. *Asian Pac Isl Nurs J*. 2020;5(1):1-11. doi:10.31372/20200501.1066
28. Sperlich M, Seng JS, Li Y, Taylor J, Bradbury-Jones C. Integrating trauma-informed care into maternity care practice: conceptual and practical issues. *J Midwifery Womens Health*. 2017;62(6):661-672. doi:10.1111/jmwh.12674
29. Leeners B, Stiller R, Block E, Gorres G, Rath W, Tschudin S. Prenatal care in adult women exposed to childhood sexual abuse. *J Perinat Med*. 2013;41(4):365-374. doi:10.1515/jpm-2011-0086
30. Olsen JM. Integrative review of pregnancy health risks and outcomes associated with adverse childhood experiences. *J Obstet Gynecol Neonatal Nurs*. 2018;47(6):783-794. doi:10.1016/j.jogn.2018.09.005
31. Mehta PK, Carter T, Vinoya C, Kangovi S, Srinivas SK. Understanding high utilization of unscheduled care in pregnant women of low socioeconomic status. *Womens Health Issues*. 2017;27(4):441-448. doi:10.1016/j.whi.2017.01.007
32. Billing & payment. ACES aware website. Accessed September 14, 2023. https://www.acesaware.org/learn-about-screening/billing-payment/
33. LoGiudice JA, Tillman S, Sarguru SS. A midwifery perspective on trauma-informed care clinical recommendations. *J Midwifery Womens Health*. 2023;68(2):165-169. doi:10.1111/jmwh.13462
34. Lydsdottir LB, Howard LM, Olafsdottir H, Einarsson H, Steingrimsdottir T, Sigurdsson JF. Adverse life experiences and common mental health problems in pregnancy: a causal pathway analysis. *Arch Womens Ment Health*. 2019;22(1):75-83. doi:10.1007/s00737-018-0881-7
35. Shonkoff JP, Boyce WT, Levitt P, Martinez FD, McEwen B. Leveraging the biology of adversity and resilience to transform pediatric practice. *Pediatrics*. 2021;147(2):e20193845. doi:10.1542/peds.2019-3845
36. Skjothaug T, Smith L, Wentzel-Larsen T, Moe V. Does fathers' prenatal mental health bear a relationship to parenting stress at 6 months? *Infant Mental Health Journal*. 2018;39(5):537-551. doi:10.1002/imhj.21739

15422011, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jmwh.13660, Wiley Online Library on [17/07/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License