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Patients' perspectives about sharing information with providers on social needs during pregnancy: a qualitative study

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Abstract

Background There is increasing interest in addressing adverse social determinants of health (SDoH) as a part of clinical care, yet there is limited understanding about the perspectives of patients, including pregnant and postpartum individuals from marginalized groups, that can be used to inform collection and use of information about patients' social needs. This study examines the perceptions of patients regarding barriers to and facilitators of sharing information about social needs during pregnancy with their obstetric providers.

Methods In this qualitative study, we conducted exploratory semi-structured telephone and in-person interviews with pregnant and postpartum patients of an ambulatory obstetrics and gynecology clinic serving a large and racially diverse population primarily covered by Medicaid. Researchers recruited English-speaking pregnant and postpartum individuals 18 years or older during their clinic visits. We asked about experiences of and preferences for sharing social needs information with healthcare providers and receiving support to address those needs. We used deductive and reflective thematic analysis to categorize verbatim transcripts of the patients' interviews into codes and themes.

Results Twenty-two pregnant (6 to 37 weeks of gestation) and 4 postpartum (1 to 1.5 months postpartum) patients participated in interviews. Their median age was 28 years (range: 18 to 38); 54% identified as Black, 19% White, 12% Latinx, 8% Asian, and 8% multiracial. We delineated two subthemes relating to perceived barriers to sharing information about social needs with providers: process barriers (never/inconsistently asked; limited time during appointments; inadequate ways to capture information about pregnancy-related social needs); and expectation discordancy barriers (skepticism about providers' intentions to help; perceiving the clinician role as limited to physical health). Additionally, we defined two subthemes that facilitate patients' sharing social needs information with providers: relational facilitators (good relationships with providers; providers demonstrate effective interpersonal skills; pregnancy as opportune time to build relationships with providers); and process facilitators (ensured privacy and confidentiality; receiving more than a list of resources).

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Conclusions Health systems should consider the perspectives of patients to inform processes around the collection and use of information about SDoH to increase equity, improve patient-centered care during pregnancy, and improve maternal and infant outcomes.

Keywords Social needs, Social determinants of health, Patient-provider interactions, Patient preferences, Pregnancy, Health equity

Background

Social determinants of health (SDoH), most commonly described as the structural conditions in which people are "born, grow, work, live, and age", play a significant contributing role in health outcomes and quality of life [1–4]. It has been estimated that up to 80% of a person's health status can be directly or indirectly attributed to SDoH, while medical care may account for only 20% [5]. In the United States, the detrimental health effects related to adverse SDoH have been demonstrated for cardiovascular disease [6, 7], diabetes [8–10], asthma [11, 12], and COVID-19 [13, 14], as well as for adverse pregnancy outcomes [15].

The impact of SDoH on maternal and infant health outcomes is particularly striking, with the accumulation of negative SDoH factors contributing to higher mortality rates [16]. For example, one study found that infant mortality was three times higher for individuals reporting one or more social needs during pregnancy [17]. The severity of the problem in the US is evident. In 2022, the US maternal mortality rate was 22 per 100,000 live births, more than double the rate in other high-income nations [18]. Notably, Black Americans experienced maternal and infant mortality rates nearly 2.5 times those of White individuals [19, 20]. Numerous negative SDoH factors, including low socioeconomic status [21], rurality [22], inadequate nutrition [23], and structural racism [24, 25] contribute to adverse maternal outcomes. Increasingly, information about patients' social needs is being collected during clinical encounters in both inpatient [26, 27] and outpatient settings [28–30], including from pregnant individuals [31]. Social needs are the non-medical social risks and negative SDoH factors that individuals prioritize as most immediately affecting their health [32, 33]. For example, even as pregnant individuals may report having multiple needs, they more often may request assistance addressing some of those specific needs such as intimate partner violence, social support, food insecurity, and housing [34]. The numerous prenatal clinical encounters afford providers multiple opportunities for increased patient engagement to modify behaviors and address social needs during pregnancy [35]. Understanding patients' perspectives regarding screening for social needs during these multiple encounters is of paramount importance to inform the design and implementation of interventions that can improve maternal and infant health outcomes.

Although recent studies have offered insight and guidance for health systems and healthcare practitioners with respect to the role of screening for social needs and the provision of resources for non-obstetric populations, particularly for people from marginalized and underserved communities [36–40], it is not clear how well the findings apply to patients receiving maternity care. Specifically, many questions remain about the best methods to screen for and address social needs during pregnancy, especially for patients from marginalized groups. To address this gap, we sought to understand patients' perspectives about barriers to and facilitators of sharing social needs information during pregnancy with their providers.

Methods

Study design and setting

Our qualitative study involved semi-structured interviews with pregnant and postpartum patients receiving obstetrics and gynecology care at an ambulatory clinic within a large, midwestern academic medical center. The exploratory interviews comprised the first part of a larger study and informed design and implementation of a subsequent intervention that aims to improve maternal and infant outcomes by asking about and providing linkages to resources to help mitigate identified social needs. The clinic provides prenatal care for approximately 1,000 individuals annually, a majority of whom self-identified as non-Hispanic Black and are primarily covered by Medicaid. The clinic had one social worker on staff at the time of the study. The Ohio State University Institutional Review Board approved this research under study #2020B0038. We followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) reporting guidelines [41].

Data collection

From November 2022 to February 2023, a research staff member embedded in the clinic used pre-existing data from clinical records to recruit eligible patients during regular clinic visits. The staff used purposive sampling focused on maximizing variability with respect to participants' gestational age/postpartum status and race and ethnicity. Study eligibility criteria included being age 18 years or older, English-speaking, and pregnant or up to one-year postpartum. The initial research protocol involved conducting telephone interviews, thus access to a telephone was an initial criterion for study inclusion;

however, the research team modified the protocol to conduct the final five interviews in person to enable the collection of additional information. For telephone interviews, two White, doctoral-trained women with qualitative interviewing experience and no prior connection to the patients (RGO, HM) called interested patients and, after obtaining verbal informed consent, conducted the interview. The first author conducted the in-person interviews. Interviews took place November 2022 to February 2023 and were recorded and transcribed verbatim to accurately capture conversational nuances [42]. Participants received a $25 gift card.

Our exploratory study used pragmatic inquiry to discover individuals' insights [43] into sharing information about social needs. The semi-structured interview guide included questions developed by the researchers covering past experiences sharing information about social needs in healthcare settings, being connected to services to address their social needs, preferences for sharing this type of information, and experiences using the patient portal to communicate with providers. The interview guide gave participants a broad definition of social needs by referencing non-medical needs and environmental conditions that could affect a person's health during pregnancy and used examples including home environment and family life, sense of safety and security, being treated fairly without discrimination, and having access to food, childcare, or transportation. Later in the interview, interviewers asked about participants' age, race and ethnicity, weeks pregnant or postpartum, and previous pregnancy history. As part of the iterative process of pragmatic qualitative inquiry [43], after initial review of early transcripts, the research team modified the interview guide two times to ensure saturation in data collection based on the research question [44]: the first modification refined questions about social needs; the second modification allowed a paper-based questionnaire asking about specific social needs to be shared with participants during in-person interview sessions. The final interview guide, including the social needs questionnaire, is provided as Supplement 1.

Table 1 Participant demographics

Patient characteristics	**Number of patients *N* = 26 *n* (%)**
Age	
18–24 years	10 (38.5)
25–29 years	7 (26.9)
30–34 years	4 (15.4)
35 + years	5 (19.2)
Race/Ethnicity	
Black	14 (53.8)
White	5 (19.2)
Latinx	3 (11.5)
Multiracial	2 (7.7)
Asian	2 (7.7)
Pregnancy or Postpartum Status	
1st trimester (0–13 weeks)	3 (11.5)
2nd trimester (14–27 weeks)	10 (38.5)
3rd trimester (28–40 weeks)	9 (54.6)
Postpartum	4 (15.4)
First Pregnancy	
Yes	6 (23.7)
No	15 (57.7)
Unknown	5 (19.2)

Data analysis

The focus of the analysis for this study was on the sections of the interviews discussing the topic of social needs. The research team used ATLAS.ti (version 23) to support data coding and analysis. After developing a preliminary coding dictionary based on concepts from the interview guide (Supplement 2), three researchers (RGO, HM, and SRM) coded two interviews using this dictionary, meeting to ensure consensus about code application. They then deductively coded the remaining 24 interviews using this preliminary coding dictionary. Next, in a second round of coding using a subset of codes relevant to questions about barriers to and facilitators of sharing information about social needs, RGO and HM used reflective thematic analysis [45, 46] to inductively develop additional codes, code all interviews, and then group codes into subthemes. The researchers developed themes and subthemes that were grounded in analysis of the verbatim transcripts from the participant interviews and did not rely on any pre-existing conceptual frameworks. Throughout the reflexive thematic coding and analysis process, RGO and HM met regularly to reach consensus. In addition, as part of regular peer debriefing in a triangulation process, all authors confirmed that the themes and subthemes reflected the data.

Results

Participant characteristics

We interviewed 26 patients, including 21 via telephone and five in person. Interviews lasted an average of 22 min (range: 9 to 41 min). Study participants (Table 1) included 22 pregnant patients (6 weeks to 37 weeks of gestation) and four postpartum patients (1 month to 1.5 months postpartum). The median age of interviewees was 28 years (range: 18 to 38 years). The majority of participants identified as Black (53.8%) and had been pregnant more than once (57.7%).

Sharing social needs information with providers

Patients described both barriers to and facilitators of sharing information about their social needs with healthcare providers. Their descriptions focused on the context of the clinical encounters and their interactions with providers during their appointments. We categorized information from participants' narratives about barriers to sharing information as process and expectation discordancy barriers. Process barriers included aspects of clinical processes and appointment activities that patients felt inhibited their ability to share information about social needs. We interpreted other descriptions about barriers as expectation discordancy, a term we use to define patients' assumptions about the potential dissonance between clinicians' primary role as healthcare providers and their motivations for asking about social needs.

Alternatively, we found that participants further discussed ways that providers and the obstetric clinic activities might encourage them to share information about any social needs they might have. We categorized these supportive interactions and processes as facilitators. Further, we labeled facilitators as relational if the interpersonal interactions with providers were positive, and process if specific clinical practices seemed to support discussions of social needs topics. We describe the categorized subthemes in more detail under each of these barrier and facilitator themes below and present representative quotes from participants.

Barriers to sharing information about social needs with healthcare providers

Patients noted two sub-themes that made it more difficult to share information about their social needs with healthcare providers: process barriers (never/inconsistently asked, limited time during appointments, inadequate ways to capture information about pregnancy-related social needs) and expectation discordancy barriers (skepticism about providers' intentions to help, perceiving the clinician role as limited to physical health). Details about these subthemes are described below with additional supporting quotations presented in Table 2.

Table 2 Barriers to sharing information about social needs with healthcare providers

Subthemes	Representative comments
Process Barriers	
Never/inconsistently asked about social needs	"They've never brought it up to me or to anyone I've known. Like, if you guys need help getting here or something like that, then we could maybe provide some type of resources or anything like that. I think if they would bring it up, it would be easier for me to talk about it. But since it's never brought up, I think, well they might not be able to handle that." PATIENT18 "I couldn't even— I could count on one hand how many times I've been asked in my whole lifetime from providers I've mentioned." PATIENT26
Limited time during appointments	"They're really time restrained. And I mean, yeah, it's not that much time to discuss detailed things like [social needs]." PATIENT22 "I feel like sometimes people are like asking you questions in person - it's kind of like, it feels like pressure on you …[because you can't take your time]." PATIENT17
Inadequate ways to capture information about pregnancy-related social needs	"I haven't talked to any doctors about losing my job, about being sick, or getting another job… I would throw up like all the time…get sick at least seven times a day… I didn't know if it was just because of the pregnancy, if it still was a mix of my [pre-existing] gastritis… But I would tell them about it and they just, you know, take some nausea medicine…little pregnancy candies. They just said it was very normal and it'll get better soon. So, I was thinking if I go to the doctor and tell them again, you know, like well I lost my job or something, I don't know. There might not be much they can do cause like they keep saying it's super normal for me to feel this way." PATIENT18 "If my days are continuously stressful or I can't function the way that I could be functioning. If my mood is a little bit more haywire than usual. Because I know while you're pregnant, you're already out of whack, but you know with certain conditions and environments that, cause it to be a little it's more crazy." PATIENT16
Expectation Discordancy Barriers	
Skepticism about providers' intentions to help	"I know I've got a lot of feedback like people be wondering like why do you ask these? We could get you resource… Well, can you give me food stamps? I need food stamps. I need health coverage." PATIENT23 "Even when it comes to, if they can't help you, if they can't help you and show that they're interested in helping you, some people don't care. So again, like I stated, it's people who sit up there and get in people's business and ask questions, but they're not helping. So, question is, why are you asking me a question about my personal life? When it's already embarrassing to me that I'm going through this and hurt that I'm going through this, but when telling you about it, you can't help in no type of way. Why are you asking me about that? It's none of your business." PATIENT15
Perceiving the clinician role as limited to physical health	"No, because I feel like a doctor's main focus is about the - if you pregnant about your pregnancy. So, they may focus on and make sure the baby healthy, ain't nothing wrong with it, make sure you're all healthy, make sure your mental is on the right, right path." PATIENT20 "I didn't even know a doctor could help with [social needs], honestly." PATIENT10

Process barrier: never/inconsistently asked about social needs

Patients commented that they had never or had inconsistently been asked by medical providers about their social needs. Without prompts from providers, participants asserted that they would be unlikely to share information about their social needs. For example, one patient commented: "You want to reach out, but nobody's asking you the question. So, nobody asked you, then you don't bring - like you just don't go to the doctor or to somebody and be like, well, this is happening in my life" (Patient26).

Process barrier: limited time during appointments

Additionally, patients noted that the limited time during appointments was a barrier to share information about social needs with providers. Participants mentioned feeling rushed and under pressure during appointments, especially if required to fill out forms, including social needs questionnaires. One individual stated: "And then, instead of like say, like the doctor hands [a form] to me and, well the nurse hands it to me. And then she walks out. And I'm in the middle of filling out, the doctor come in, and I done laid it down. I forgot about it talking to the doctor. And now I don't even want to do it. I'm ready to go now" (Patient23).

Process barrier: inadequate ways to capture information about pregnancy-related social needs

Some participants mentioned how their social needs intertwined with physical aspects of pregnancy that they felt uncomfortable about or unable to share in a way (e.g., by standard social risk questionnaires) that could capture those nuances. For example, after reviewing a paper-based questionnaire asking about social needs, one participant mentioned that the employment question did not address pregnancy-specific issues that people could encounter: "Some jobs don't pay maternity leave. But on here it says, like are you … unemployed or without regular income. But what about if you're pregnant and working, but you work at a job that don't offer like maternity leave" (Patient26).

Expectation discordancy barrier: skepticism about providers' intentions to help

Patients also expressed skepticism about the intentions of those asking them questions about their social needs. Some patients mentioned that they had been asked about their social needs in the past but noted that they had not received the help from providers that they had expected in return. In these situations, participants described feeling that the questioner was just being nosey. For example, one patient commented: "If I was in that predicament, and I have been in that predicament before, sometimes it depends on who you into. And if they're really trying to help or, you know, just get information. 'Cause it is a lot of people who ask the same question that not help the outcome…" (Patient16).

Expectation discordancy barrier: perceiving the clinician role as limited to physical health

Further, patients seemed to categorize the clinician role as caring for patients' physical health rather than attending to their social needs. Participants often noted that they did not perceive clinicians as being able to help address their social needs as this was not part of what patients categorize as health care. A participant described her understanding of why patients do not share social needs as: "[Patients] feel like a doctor really do nothing but just doctor; they just know the health" (Patient20).

Facilitators of sharing information about social needs with healthcare providers

We created two subthemes around factors that could facilitate patients' sharing of social needs information with their providers: relational facilitators (good relationship with provider, providers demonstrated effective interpersonal skills, pregnancy as opportune time to build relationships with providers), and process facilitators (ensured privacy and confidentiality, receiving more than a list of resources). Details about facilitator subthemes are described below with additional supporting quotations presented in Table 3.

Relational facilitator: good relationship with provider

Pregnant and postpartum patients described that they would be more comfortable sharing information about social needs with providers with whom they had a good patient-provider relationship or connection. Good relationships were described as ones built over time and involved trust. As one participant described: "And maybe if they see that same doctor at every appointment, they build a relationship with that doctor. So, they'll feel comfortable enough telling their doctor what's going on and what they need help with" (Patient08).

Relational facilitator: providers demonstrated effective interpersonal skills

Participants also described feeling more comfortable sharing social needs information if providers demonstrated effective interpersonal skills like listening, showing understanding, expressing empathy, and not being judgmental. An individual noted: "to make somebody comfortable… just show sympathy. Show that you care, and you're trying to help that person or make them feel better. And let them know that, you know, it's light on the other side" (Patient15).

Table 3 Facilitators of sharing information about social needs with healthcare providers

Subthemes	Representative comments
Relational Facilitators	
Good relationship with provider	"I think they'd feel most comfortable about providing [social needs information] if they trust their doctor, and a doctor that actually cares. Some doctors don't really care. You're just a patient." PATIENT09 "But if you're not comfortable with your provider, you probably wouldn't [tell them about your needs]. It's important to have a good bond with your provider." PATIENT05
Providers demonstrated effective interpersonal skills	"The concern level that my providers or doctors have and the fact that they listen, and you feel like you have an open ear, makes it more comfortable to share you know information and you feel heard … Yeah, I guess there will be instances where I'm more comfortable, depending on just how the doctor is communicating and how comfortable they're really allowing me to be in their presence. So, whether it seems like they care or not." PATIENT06 "Guess they could try to ask in a way that didn't make patients feel judged… I guess, like sometimes you can just tell in people's tone or their facial expressions, like if they're giving you a weird look or if like- I don't know how to explain it." PATIENT22
Pregnancy as opportune time to build relationships with providers	I think that would definitely be helpful [to be asked about social needs frequently], because then the more times you see [the questions], the more time, the more you're willing to be honest with it." PATIENT24 "It's like, everything's going to be okay. Like just make sure they really reassure them because like pregnancy is hard. I had a really rough pregnancy, and I didn't really have anybody there for me, and I felt like the doctors, like they were really helpful." PATIENT03
Process Facilitators	
Ensured privacy and confidentiality	"What I don't like is it looks like everyone [the entire clinic] can see the messages that I'm sending off to the doctors… I don't like that." PATIENT09 "[I would answer] if it was something like this where you didn't have to put your name on it, then yeah. But electronically, I would feel like, you know, that would keep my information, you know. And then it would get used or you know something like that. But if it's something like this so where you don't have to put your name on it then yeah." PATIENT24
Receiving more than a list of resources	"Another thing that will make me feel safe - as if they were ever able to help me in whatever that I'm struggling with, whether it's just stability and support or if it's things that are filled with action - like actually giving me the resources to be able to provide food, have a job, transportation, housing, get away from an abusive spouse or things like that." PATIENT16 "Some social workers, they give out papers saying there's a whole bunch of resources on here. Call this number for rent. Call this number for food. Call this number for that. At the end of the day, sometimes when a person do try to get in touch, they go through so much stuff and they're still not able to get the resources … There is social workers out there who actually do help… They help them fill out rent or an application. Or help them contact somebody to set up an appointment to get food or for the pantry … It's a lot better and a lot easier to get through, especially with somebody that's having trouble time to get resources." PATIENT15

Relational facilitator: pregnancy as opportune time to build relationships with providers

Participants described pregnancy as a unique time because potential opportunities to share information with providers increase due to regular prenatal appointments. As a result, patients noted more willingness to share information about their social needs. One patient explained: "I don't really go to the doctor often. I only have been going to the doctor consistently just because I've been pregnant" (Patient16). Later, this participant described disclosing information about a challenge she was having with a provider at the obstetric clinic, and this provider was able to offer the help she needed.

Process facilitator: ensured privacy and confidentiality

Because of the sensitive nature of questions about social needs, many patients expressed concern about who potentially would have access to the information they may share. For instance, when one participant was asked what would make her feel more comfortable sharing information about social needs, she explained that privacy was important to her: "Just being alone with the doctor.… Being alone with the nurse or doctor" (Patient14).

Process facilitator: receiving more than a list of resources

Interviewees also discussed how sharing information was easier when they knew they would receive help or have a warm hand off to potentially address their needs rather than have their needs dismissed or receive only a list of resources. Patients mentioned receiving pamphlets, particularly about the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and packets of information for outside agencies, but reportedly found it more helpful to meet with a social worker. Some described how having the social worker help with paperwork or having direct access to agencies' representatives in the clinic was especially beneficial. One respondent detailed the challenges she experienced and help she received to enroll in WIC: "Yeah, 'cause they closed down a lot of the WIC buildings. So, I kept trying to get in before like they referred me. And then like one day [someone at the healthcare clinic] brought it up. And I was just like, 'Yeah, I've been trying to contact [them]; I'm waiting on a phone call back.' And that's when they told me the lady [who worked for WIC] was downstairs… I got on WIC that same day" (Patient26).

Discussion

Health systems' efforts to identify and address adverse SDoH to improve patients' health outcomes have been mounting given the need to increase health equity. Notably, pregnancy is a critical time to engage patients given that they may consider that sharing information about social needs helps not only themselves but their baby. The pregnant and postpartum participants in this study described process barriers to sharing information, such as inconsistency of being asked and limited time during their appointments, as well as expectation discordancy barriers related to (mis)understanding of providers' intentions and roles. Participants also described several facilitators of information sharing, including relational facilitators around providers' interpersonal skills and the patient-provider relationship, and process facilitators, such as assurances of privacy and confidentiality and believing they would be able to receive actual help to address identified needs.

These barriers and facilitators identified in our study resonate with findings from other studies of various patients in primary care settings [47] and with pregnant individuals [48–50]. For instance, our study participants reported that they had had limited experience sharing information about their social needs during obstetric visits, which mirrors previous findings that patients are rarely, if ever, asked about these needs [51]. The patients in our study had negative assumptions about how adding social needs screening to already busy prenatal visits might affect their medical care. Similarly, others have found that for Black, low-income patients, the current level of maternal care already may not meet their expectations [52]. While the participants in our study seemed surprised that providers might be willing or able to address issues beyond their physical health, others studies using human-centered design found patients had imagined ideal care that included psycho-social support for everyone [48, 52].

Prior work has found that patients reported that their willingness to share information about their social needs was influenced by their perceptions about their relationships with their providers, noting that they were more willing to share if they had an established relationship with their provider and/or viewed their providers as kind, caring, and trustworthy [36–39]. For patients who receive care throughout a pregnancy, the frequency of obstetrical visits can help establish a consistent clinical connection and may provide an ongoing opportunity for innovative solutions to address social needs [35]. However, participants in our study, like patients from marginalized groups who receive care at other academic institutions serving large Medicaid populations, often receive care from rotating providers, including residents, which may limit their ability to build relationships with their providers [52, 53].

The results of our study also suggest that patients receiving obstetric care want to know the reasons for collecting information about their social needs, as well as how and by whom this information will be used. This finding is similar to what has been seen in other clinical settings indicating that many patients are understandably suspicious about healthcare providers' and systems' intentions in asking about SDoH when their ability to address identified needs is unclear [36, 37, 39]. Our results highlight the need to inform patients about the collection and use of their social needs information, particularly for patients who are more likely to have had negative experiences such as those who may have been stereotyped, have had information dismissed, or felt their information was used punitively [54–57]. As others have suggested, gathering information on SDoH, if not done with care, may lead to worse health and health-equity outcomes [58].

With higher rates of maternal and infant mortality for Black individuals compared to their White counterparts, even taking into account other SDoH factors [16, 59, 60], it is vital to find ways to improve health equity and health outcomes, particularly during pregnancy. For example, it is essential to address individual and structural racism that is not directly related to socioeconomic status, including the impact of everyday racism and chronic stress from discrimination [61], implicit bias [62], and disrespectful maternal care [63], which have also been suggested to play a major role in exacerbating maternal and infant health disparities.

Experts have called for better data collection to improve maternal and child health outcomes, particularly collection of information about patient-reported experiences from those who are disproportionately affected by adverse SDoH [64]. Our study participants reported that current social needs questionnaires [65–67] may be limited in their ability to capture the intertwined and complex aspects of pregnant patients' health and social needs. Such questions may need to be expanded or modified, perhaps including allowing for open-ended responses, to better capture and elucidate the specific experiences of pregnant individuals, including nuances such as employment during pregnancy.

Recommending improvements to maternal care processes and addressing the structural aspects of communities from which many marginalized patients reside, like those in our study, are beyond the scope of this study. Nevertheless, since pregnancy is an opportune time to activate patients' positive health-seeking behaviors [35] and addressing social needs during pregnancy may subsequently impact SDoH across multiple generations, the importance of a comprehensive approach to gathering information about and addressing social needs in obstetric care is warranted. Future research on screening and addressing social needs could explore mediating factors such as past health system discrimination and patients' trust in providers [68]. However, as health systems intensify implementation strategies to collect and document information on SDoH and social needs [69–71] and consider how best to address patients' social needs, patients' perspectives (e.g., they want to receive specific and targeted assistance) will be crucial to consider. Understanding the lived experiences, challenges, and preferences of patients, especially those from marginalized groups, particularly Black, Indigenous, People of Color (BIPOC), can inform interventions and promote equitable health outcomes. In this regard, health system-social service partnerships may be particularly effective [72]. Strategies for screening for social needs and providing linkages to community resources, such as those that address intimate partner violence and nutrition, have been established in some obstetric settings [34, 73–75]. Furthermore, access to social workers, case workers, and/or social services providers who are embedded within a clinic or are available with a warm hand-off, may increase the ability of organizations to address identified social needs. Only through a better understanding of patients' perspectives and experiences can patient-centered interventions that address their needs be designed, implemented, and impactful.

Limitations

Several limitations should be considered when interpreting the results of our study. First, our study was limited to patients who receive care at a single clinical site and therefore represent perspectives specific to this healthcare setting. Second, we did not include perspectives of the healthcare team in this analysis as we wanted to highlight voices of patients whose perspectives are often missing in research. Future research may explore obstetric providers' perspectives on their and their clinics' readiness to collect information about social needs. Additionally, there was neither racial nor ethnic concordance between the interviewers and all interviewees, thus some participants may have been less forthright in their responses to some questions in these interviews. Finally, we limited our interviews to those who spoke English and therefore could not assess challenges sharing information about social needs and receiving support specific to those who do not speak English. As these individuals may face additional barriers due to discordant language with their healthcare team, future research should include these populations to understand their perspectives.

Conclusion

Perspectives from pregnant individuals can be used to help inform health systems as they implement methods to collect and use social needs information if the delivery of patient-centered care and equitable health outcomes are to be achieved. Particularly during a time, such as pregnancy, when patients regularly see providers and are activated to be engaged in their health care, there can be an opportunity to build trusted provider-patient relationships as well as to find innovative ways to help patients address adverse SDoH.

Abbreviations

SDoH	Social determinants of health
COREQ	Consolidated Criteria for Reporting Qualitative Research
BIPOC	Black, Indigenous, People of Color

Supplementary Information

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Supplementary Material 1.

Supplementary Material 2.

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Authors' contributions

SRM, LJR, KFJ, WAG, and ASM conceived the study and the overall study design. WAG, ASM supervised the conduct of the study. RGO, HM, SRM, NT, LR, MB, and ASM acquired, analyzed, and interpreted the data. All authors reviewed the data and results. RGO, HM, SRM, NT, LJR, WAG, and ASM drafted the manuscript. All authors reviewed the manuscript. All authors approved the final manuscript and agree to be accountable for all aspects of the work.

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Data availability

Data cannot be shared publicly because of potentially identifying patient information. Reasonable request for data should be addressed to the corresponding author.

Declarations

Ethics approval and consent to participate
The Ohio State University's Institutional Review Board approved this research under study #2020B0038. The study was conducted in accordance with the Declaration of Helsinki. Oral informed consent, as approved by The Ohio State University's Institutional Review Board, was obtained from each participant prior to their participation in the interview.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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