The Intersection of Everyday Life and Group Prenatal Care for Women in Two Urban Clinics

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Abstract: Women from vulnerable populations encounter challenging circumstances that generate stress and may adversely affect their health. Group prenatal care (GPNC) incorporates features that address social stressors, and has been demonstrated to improve pregnancy outcomes and prenatal care experiences. In this qualitative study, we describe the complex circumstances in the lives of women receiving care in two urban clinics and how GPNC attenuated them. Stressors included problems with transportation and child care, demanding jobs, poverty, homelessness, difficult relationships with partners, limited family support, and frustrating health care experiences. Receiving prenatal care in groups allowed women to strengthen relationships with significant others, gain social support, and develop meaningful relationships with group leaders. By eliminating waits and providing the opportunity to participate in care, GPNC also offered sanctuary from frustrations encountered in receiving individual care. Reducing such stressors may help improve pregnancy outcomes; however, more evidence is needed on mechanisms underlying these effects.

Key words: Prenatal care, pregnancy, minority health, qualitative research, psychosocial stress, pregnancy outcomes.

Women from vulnerable populations routinely encounter profoundly challenging circumstances that generate stress and may adversely affect their health. These conditions include limited social support, unemployment, poverty, housing instability, living in dangerous communities, and racism.[1,2] When compounded with difficulties accessing care, these challenges may impede low-income and minority women from

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receiving health care. As a result, pregnant women may delay or refrain from receiving prenatal care, or fail to obtain needed care for chronic illnesses or high risk health behaviors.[3] In addition, low-income and minority women may have unpleasant or frustrating experiences of care during pregnancy, which may further deter them from receiving care.[4]

There is a growing focus on examining the effects of social and environmental stressors on health and health disparities, and on developing effective interventions to address them.[1,5–9] It is, therefore, particularly important to understand how interventions attenuate such stressors. This may be critical for prenatal programs, as maternal prenatal stress is conjectured to expose children to *in utero* stress. This, in turn, may result in cumulative adverse effects on children's health that are passed on to future generations of mothers and children.[5,8]

Group prenatal care (GPNC) is an alternative approach to providing prenatal health care that has features designed to address a number of personal stressors in the lives of pregnant women. This model has been demonstrated to provide a positive experience of care, reduce measured stress, and improve certain critical pregnancy outcomes, particularly for low-income, minority mothers.[10–13] The purpose of this paper is to describe 1) the complex circumstances in the lives of women receiving GPNC in two clinics—circumstances that created personal stress and generated challenges for the women in receiving prenatal care—and 2) the ways in which GPNC attenuated some of these difficulties.

CenteringPregnancy group prenatal care. The CenteringPregnancy model of group prenatal care (Centering) has been discussed in detail elsewhere,[13–16] and will be described briefly here. Centering provides prenatal care to groups of 8–12 women of similar gestational ages and their significant others. After an initial individual prenatal visit for a complete history and physical examination, women attend 8–10 two-hour group sessions. These sessions, which replace individual return prenatal visits, are conducted in accordance with the standard schedule for return prenatal care. In a typical session, women enter the group space without waiting, are taught to take their own blood pressure and weigh themselves, and record the findings. Women then sit in chairs arranged in a circle, and await individual prenatal physical examinations. During this time, women may fill out self-assessment sheets and chat informally. Snacks may also be provided. When examinations are completed, group members participate in facilitated discussions that cover a wide range of pregnancy-related health topics and provide peer support. Significant others may be invited to attend, although children's attendance is discouraged. Centering is ideally conducted by two facilitators, one of whom is a prenatal care clinician, but sessions can incorporate providers of ancillary services such as social workers and nutritionists. More than 300 sites have implemented Centering groups since 1993 (SS Rising, personal communication). The Centering Healthcare Institute develops materials for implementing CenteringPregnancy and conducts a site approval process.[17]

Although evidence is still limited, Centering appears to produce pregnancy outcomes and experiences of care comparable with or superior to individual care.[5,13] A randomized clinical trial comparing outcomes of Centering with individual care (n=1,047),[10] demonstrated a reduction in preterm birth, an effect that was increased in African American

mothers; decreased rates of inadequate care; and improved satisfaction with prenatal care. Centering also improved psychological outcomes: high-stress women who received an enhanced version of Centering, CP+, reported significantly increased self-esteem and decreased stress and social conflict in the third trimester, and declines in social conflict and depression at one-year postpartum.[11] Furthermore, there is evidence that Centering provides a positive experience for many low-income and minority women. Women enjoyed interacting with and learning from other women, developed strong attachments to their group leaders, and felt they were not alone with their problems and pregnancy-related fears.[12,13]

Methods

This research was conducted as part of a larger study examining women's experiences of receiving GPNC in two clinics in the context of their personal, social, community, and health care environments.[13] Previously, we have reported findings focusing on women's experience of GPNC;[13] in this article, we focus specifically on these contextual factors in women's lives and in accessing care as related to receiving GPNC. The methods for the parent study have been described in detail previously.[13] The overall approach was interpretive description, which is amenable to the integration and adaptation of diverse methods derived from varied disciplines.[18] For this analysis, we also employed situational analysis, which builds on grounded theory. The purpose of situational analysis is to explore the array of elements in a complex situation and to examine their interrelationships.[19,20] In this case, the situation explored was the set of circumstances surrounding provision and receipt of GPNC in the two clinics.

The study was conducted at two Northeastern urban clinics which served mostly low income African American or Hispanic women. In both settings, the CenteringPregnancy model and educational materials were used to provide GPNC. However, neither setting had obtained prior Centering Healthcare Institute site approval. This approval process was developed approximately when data collection for this study began, so neither was an officially approved site (SS Rising, personal communication).[13,17]

Participants (n=39) in four GPNC series convened in the course of routine care in the two clinics were studied. Principal participants (n=21), were the pregnant women attending GPNC who participated in individual semistructured interviews. Of these women, 18 were African American and three were Hispanic. Their mean age was 21.6 years, 19 women were single and two were married, and their education ranged from grade school to some college. Additional participants (n=18) consisted of all others attending GPNC sessions who consented to participant-observation and being interviewed informally, but who were not interviewed formally. These participants were eight pregnant women, six guests (three male, three female), two certified nurse-midwife (CNM) group leaders (one per clinic) and two medical assistants. The mean number of pregnant women attending each GPNC session was 4.5 (range 1–8). Sessions were led by a certified nurse-midwife facilitator; at times an additional staff person assisted.

Human subject committee approvals were obtained from Yale University and both clinical settings prior to data collection. The first author collected all data from March 2007 through September 2008. Data collection procedures[13] included 54 semistructured

interviews of 45 pregnant women and two group leaders, participant-observation of 36 GPNC sessions (four completed and one incomplete series), and medical record review. Interviews of pregnant women included questions on women's experience of GPNC, their personal lives, social contexts, and prior and current health care experiences. Group leaders were asked to provide their perspectives on women's lives and factors in their clinical settings that influenced providing or receiving GPNC. Participant-observation was conducted by the first author and this approach provided field data for the description of activities during sessions and provided understanding of individual interview data in the context of these activities. Interviews were audiotaped and transcribed, and extensive field notes recorded processes, interactions, informal interview data, and researcher impressions during participant-observation. Data obtained from health records were used to describe the study population and to provide additional understanding of women's social situations and health status. Data collection procedures were modified during the course of the study, consistent with qualitative emergent design.[21]

Data analysis for the parent study was inductive and began during data collection. Data were coded and compared across codes, participants, groups, and settings for patterns and themes; profiles were developed of GPNC participants, groups, series, and sites, integrating different data sources; and themes were compared across individuals, series, and sites. Altas.ti qualitative software assisted in data management (Scientific Software Development, GmbH. [2011] ATLAS.ti [Version 5.7.1] [qualitative computer software] Berlin).

After initial thematic analysis for the parent study,[13] situational analysis (SA)[19,20] was conducted to examine the situation in women's lives and in the clinics surrounding the provision and receipt of GPNC. Situational analysis allows the researcher to think globally about a phenomenon at the level of the overall situation by incorporating a wide range of factors, including individuals, groups of individuals, physical and environmental factors, concepts, and "social structural elements that have bearing on the actors."[22[p.568]] The central strategy of SA is construction of a series of different types of visual maps which serve as heuristic devices to elicit this comprehensive list of factors, to explore which factors are relevant and, finally, to consider how these factors are related. An exemplar map, depicting the stressors women experienced, can be seen in Figure 1. It should be emphasized, however, that maps are analytic tools and not final products.

First, to generate a comprehensive set of factors in the situation, the first author read all coded output for any codes relevant to the contexts in which GPNC was provided or received. After generating a list of factors or elements in the situation, a series of diagrams were drawn, placing the elements in juxtaposition to one another. Elements that seemed irrelevant to the situation were eliminated and meaningful clusters and groupings were created with an eye to developing an understanding of how elements or groups of elements influenced one another or the situation. Next, lines were drawn between elements and clusters of elements to display connections and further explore possible influences of elements or groups of elements upon one another. As maps were drawn, the first author noted themes and patterns that were becoming apparent, returning to reread coded content to validate and refine these ideas. The process of drawing maps, reading coded output, redrawing maps, and refining themes was complete when new elements, relationships between elements, maps, or patterns were no

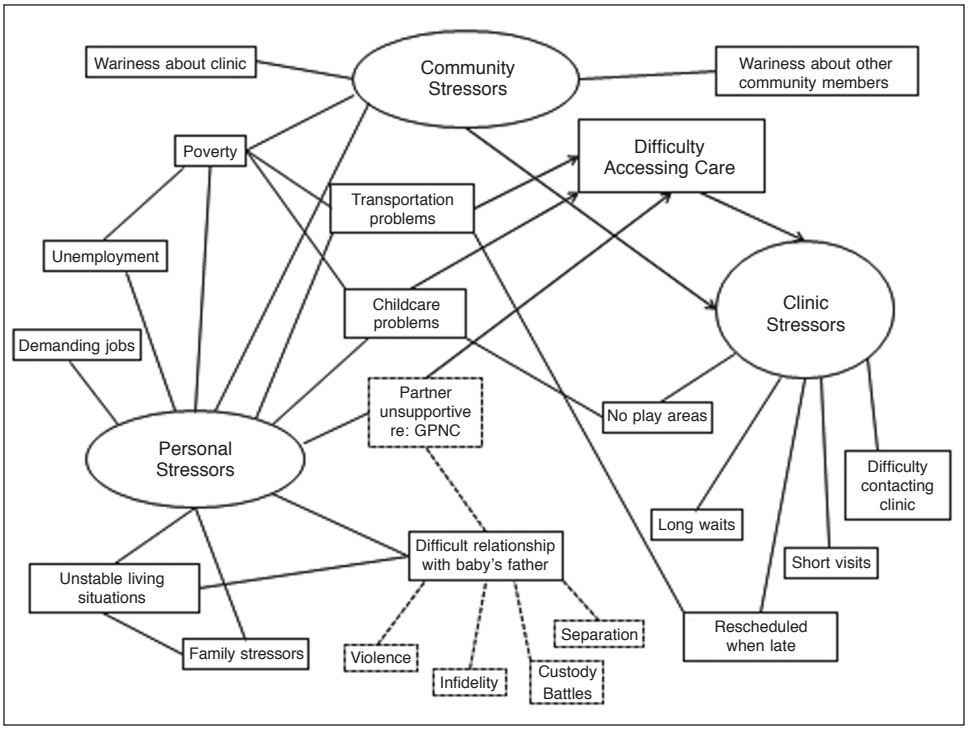

Figure 1. Example of situational map: women's stressors.

longer being generated. Throughout the analytic process, the initial versions of maps created by the first author were reviewed and revised by the second and third authors, leading to refinement of the findings.

Findings related to the context in which GPNC was provided in the clinics are reported elsewhere.[23] Findings related to factors in women's lives are presented here, and are clustered in two broad groupings: one describing the stressors in women's personal lives and in receiving health care, and one discussing how GPNC attenuated these stressors.

Results

The participants in this study were low-income, minority women receiving prenatal care in two urban clinics. It is perhaps not surprising that women in these social circumstances had difficult lives; however, when the women and group leaders described women's situations in depth and over time, the severity and complexity of their stressors became evident. Although some women had financial security, strong support systems, and few impediments to receiving health care, for many women pregnancy was fraught with multiple emotional and logistical challenges. These included problems with transportation and child care, challenging work situations or unemployment, poverty, and limited social support. Women also reported frustrating experiences with health care systems, staff, and clinicians when receiving individual care. Finally, women obtained

their health care in communities that sometimes had uneasy relationships with the clinics because some residents were skeptical about whether local institutions truly served their best interests.

Clearly, no single health care program could conceivably address the myriad challenges these women faced. Nevertheless, women and group leaders perceived GPNC as ameliorating some of these problems and addressing some of these issues. In the first section of findings, we describe these numerous stressors in women's lives and in accessing care. In the second section, we discuss ways in which GPNC may have ameliorated some of the challenging circumstances in women's lives.

Stressors: "That's just the stuff women have to deal with." Women regularly faced severe financial strains and employment difficulties. Those who worked had demanding jobs as nursing assistants, salespeople and cashiers, school bus aides, and stock workers. Employers often failed to provide pregnancy accommodations such as lifting lighter loads, sitting down, or taking breaks. Several women were fired when pregnancy interfered with their work. Women's partners also lost their jobs or had difficulty getting hired owing to having "bad records." Even when employed, women and their partners sometimes still confronted severe financial stressors, as this woman explained:

> He just started working this Monday. So on his break, his mother called him and tell him that he have to pay $400 a month. And he just started that same day working! He said, he knew he had to pay her something, but dang, you know, she should understand that he have a child on the way, "How she's expecting me to save up and move out, if I'm giving her $400 a month?"

Another woman reported that financial problems had contributed to strains with her husband, and they had recently separated. She had no money or food stamps, and was trying to find a way to obtain her older child's school uniforms. Meanwhile, unemployment jeopardized her younger child's eligibility for day care. As the time was quickly approaching when she would be hospitalized for childbirth and then caring alone for her newborn and older children, she worried about how she would fulfill these multiple responsibilities.

Several women experienced separations from their partners, infidelity, or intimate partner violence. For these women, pregnancy included obtaining restraining orders, fighting custody battles, attending court hearings, being diagnosed with sexually transmitted infections, and being robbed by partners. Many women, therefore, faced the daunting prospect of parenting alone. One woman said, "I don't want to be a single mother with two kids. But if I have to, that's just the stuff that women have to deal with sometimes." Even women who remained involved with their partners nevertheless sometimes expressed a sense of vulnerability—as if the possibility that they might end up alone always loomed on the horizon:

> I was scared. 'Cause I was like, "What if, what if he . . . ?" Like a whole bunch of what ifs. I was like, "OK, I'm pregnant. What if it ruin my relationship? What if I end up just me and the baby? What if it doesn't work out and then you go through the whole visitation rights and all of this?" And it was just eating me up inside, and it's like, this is crazy.

Fortunately, families often provided emotional support and concrete help such as housing and child care. For some women, though, families could create additional demands. Several women were responsible for caring for elder or younger family members, or both. Some women's families had custody of their older children, and some women's children were in custody of the Department of Children and Families (DCF). A few women had little or no connection with their families; their family members were deceased, were incarcerated, had moved, or were simply not engaged with women's lives. Furthermore, not all family members reacted supportively to their pregnancies.

Owing to these complicated relationships, women's living situations were often unstable or characterized by frequent moves. Although some moves were happy events, such as when moving in with a partner or gaining more space for the new baby, many moves occurred under extremely difficult circumstances, such as this woman described:

> My grandmother made me feel real bad, because she told me, "When you have the baby, you and the baby can't stay here." It made me feel like, alright, she don't care. But when you don't have a job and you have the baby and you don't have nowhere to go, that is constantly on your mind.

Two women in the study were unemployed, impoverished, and had little family support. When relationships with their partners deteriorated, both moved into homeless shelters.

In addition to the personal challenges women faced, accessing health care in pregnancy was often difficult. Although some women had cars, easy access to public transportation, or lived close enough to walk, women's travel was frequently impeded by broken down cars, long waits for buses, and reliance on others for rides. Snow, rain, and icy roads delayed buses and made walking treacherous. In addition, lack of child care sometimes caused women to miss appointments or to bring children to visits. Unsupportive partners could also deter care. One woman explained how several such obstacles converged:

> He figured it wasn't really necessary for me to go, so he just stopped bringing me and stopped watching the kids, so I had to keep bringing them with me. But I felt that it was important that I still did go. Now I have to try and get rides from my parents or from my friends, or whoever I could get a ride with.

Despite the multiple hurdles the women confronted in traveling to their clinics, they reported generally positive experiences when there. Several women commented that the clinic staff put them at ease. One woman noted: "The secretaries know me because I've been coming all of the time. I know them, and they're cool, and, like, they're just nice." Sometimes, however, women reported experiencing long waits when they had come to the clinic for individual visits—such as in a prior pregnancy or after pregnancy for pediatric care. As one woman reported:

> I had three children—my two and my niece. And I was there for FOUR HOURS. It was awful. Like, by the time I left there I was upset, yelling at the kids, and it like ruined my whole weekend. Being there for four hours with three kids is no joke.

She added that the waiting area lacked toys and space for children to play. Another woman explained the unfavorable impact of waiting: "That's why we like cancel our appointments and I reschedule them, because, like, I be having other appointments, and I'm waiting there forever and then it runs into my other appointment." When women themselves arrived late, however, they encountered little flexibility or understanding about the circumstances leading to delays, which were sometimes beyond their control. For example, one participant relied on her mother-in-law for transportation. She described what happened when she arrived late: "So the WIC people were like, 'You gotta get here [within] 15 minutes because of the staff. So I just rescheduled.'" When trying to cancel appointments by phone they could not always get through.

The women's personal struggles and their challenges when accessing care were situated in the broader societal context of the impoverished communities in which some of them lived and in which both clinics were located. This in turn, presented some less obvious, but real, barriers to care. One group leader had previously provided midwifery care in other, urban, low-income settings which had numerous resources to address social problems; however, she described her current clinic's neighborhood as "a wasteland," a "forgotten city and a forgotten group of people." Resources were inadequate, and residents had correspondingly low expectations of the clinic. This contributed to guarded attitudes toward clinicians and the clinic, a phenomenon which was also noted by the other group leader. This wariness was conveyed when one participant discussed her family's suspicions about the clinic's motivation for providing GPNC in an individual interview: "They is trying to experiment. This is how DCF [Department of Children and Families] gets involved in your baby life: they know your business."

Furthermore, close ties between the clinic and the community, while ostensibly positive, sometimes compromised patient privacy. A midwife related, "I've had people say, 'I don't go to [facility name] because I know everybody and they all talk about each other.'" Some patients, however, didn't have that choice. The same midwife concluded: "Being a part of the neighborhood doesn't mean that it's a good thing or an empowering thing. It's just a default—they can't get out."

GPNC: "A synchrony in the life issues." Obviously, GPNC could not address all the hurdles women faced in their lives, in accessing care, or in their communities. However, both women and group leaders reported that GPNC had several features that helped reduce some personal stressors as well as barriers and frustrations in receiving health care. These included productive use of time, continuity with group leaders and members, extensive time in group, peer support, inclusion of significant others, and the opportunity to connect with other community members in a positive manner.

Having GPNC virtually eliminated waiting. Women repeatedly expressed appreciation that groups started promptly and that the time they spent in clinic was used productively. One group leader commented:

> I think it is a wonderful way for the women to—rather than sit and growl in the room—you know, if they are in the waiting room, clinicians are late, and there's usually not a fair amount of interaction in there. But when they're here as a group, sharing their experiences, then it becomes more productive.

One group leader noted, however, that some women realized they could reduce their waits for examinations within the group by arriving later, which resulted in a deterioration of the prompt start time. Another feature of GPNC—continuity of care—allowed women to develop relationships over time with their group leaders, whom they came to admire and trust deeply.[13] Furthermore, because the group leaders knew about women's logistical challenges, they often were tolerant when they arrived late or left early. Women appreciated the flexibility and willingness to consider their circumstances. However, group leaders sometimes found arrivals and departures disruptive, and some of the women expressed annoyance at what they felt was irresponsible, irregular attendance behaviors of fellow group members.

The group leaders also allowed children in the groups, which created both opportunities and problems. On one hand, children sometimes enhanced the informal atmosphere and served as conversational icebreakers as women inquired about or admired each others' children. Women enjoyed watching children play together, and one woman who did not bring her son wondered whether he was missing an opportunity to play with other children. Children's behaviors in the group also provided openings to address child development and parenting issues. One group leader explained:

> When you put it into context, like, "Well, it is normal. I think they are doing very well for this age to be sitting this long," it's sort of modeling what is reasonable behavior for a child versus what may be not so good.

On the other hand, the group space in one clinic was not large enough to comfortably accommodate children, toys were limited, women often found their own children distracting, and children's behavior could derail group processes or embarrass parents.[13] One midwife explained:

> It's a very stressful time for the parents because they want their kids to behave, and if they don't, it's very obvious, everybody's looking and there's, like, judgments. We're not seeing optimal parenting, and when we're talking about parenting, it makes it doubly awkward because we all know who we're talking about for bad parenting. So I think that is kind of unfair to the moms there. But I'm always willing to give it a try.

Another advantage of GPNC was the extended time. The two hour sessions (*vs.* 15 minute individual visits) allowed women to learn about pregnancy-related health topics of interest to them.[13] Group leaders noted that the lengthy discussion period also enabled women to become "active participants in their health care." In addition, time together fostered relationships among women—a feature of GPNC one group leader felt was particularly valuable for women with such difficult lives:

> Oh, I think it's wonderful, because it really affords a lot of these young women who don't necessarily have the resources or support, in their families and/or in their life situations. And so it does create a climate of, you know, there's someone in here in the group, also experiencing these things. So I do think they find a level of support in the group.

She explained that hearing that other women experienced similar problems and fears helped to normalize women's own concerns and reduce anxiety:

> And sometimes there's sort of synchrony in the life issues that the women are having in terms of relationships, particularly with their partners. They teach each other and they teach me about ways in which they are able to cope, and demonstrate some strength in their lives, no matter how chaotic sometimes it appears or how crazy it is.

The company and comfort provided by groups were so important to some women that they went to extraordinary lengths to attend. One woman in the last weeks of her pregnancy struggled to get to a group session with her children after spending four hours attending a difficult court hearing regarding her abusive partner. She described how GPNC helped her to feel less isolated and stressed:

> I'm in the house a lot of the time, by myself, just with my kids. That was one of the ways out for me to talk with others and not just be, you know, having to deal with everything on my own and not have anybody to talk to. It's just good to get to talk and laugh with other people, because, my partner, he kept most control of me getting out and being around my friends and family.

However, despite devoted attendance, some of the same women did not share their problems in the group setting. In the series observed, profound problems including homelessness and domestic violence were not discussed.[13] This reluctance to share certain intimate problems (known to the researcher through individual interviews) with others in the group was intriguing for one group leader, who facilitated a GPNC series with two women who had become homeless during their pregnancies. She wondered whether these women might have found solace and support had they shared their circumstances. The other group leader, however, commented that the tremendous "stigma" attached to certain issues made women understandably reluctant to disclose them.

By inviting the women's significant others to attend, GPNC also enhanced others' understanding of women's pregnancies. Although few partners attended regularly, one group leader explained that when they did, it strengthened couples' relationships. A woman described just such an effect: "He can understand how to cope with me, how to take the stress and the discomfort away. Now he feels being in the group meeting is a big part of supporting the expectant mom." Several women reported that their partners had learned a lot by attending, but would have been more comfortable if more men had been present. Many women brought sisters, mothers, cousins, and friends to group sessions. One woman explained why this was important: "They get to know what we're talking about and what kind of things we share with each other." A group leader also noted that the extended time for discussion in a facilitative format had provided her with a different perspective on women's lives than she would have gotten from conducting individual visits: "I take it as a great opportunity for the women to teach me about their lives and about what's important to them."

Finally, GPNC enhanced some women's feelings about their clinics, and may have also helped to strengthen relationships within the community. One woman, in talking about her clinic, said: "It just makes me think that they're doing everything they

can to make us comfortable and have the best care that you can get." The participant (described earlier) who expressed wariness about whether GPNC was a strategy used by DCF to become involved in families, ultimately attended group sessions regularly along with her partner, participated in group activities, and said she would choose GPNC over individual care in a future pregnancy. She described her feelings about being in the group:

> I felt good, because like, it was good to talk to somebody that was in your predicament, which was pregnant. It was good to talk to somebody like that, so they could understand where you coming from, and how you feeling too.

One group leader explained that, given the uneasy relationship between her clinic and the surrounding community, she was surprised that groups were succeeding there. She was pleased that community members came and participated "on their own terms" because it indicated trust. It was also a step toward "building community in a way that they [residents] have more control over it." Both group leaders believed that the racial and ethnic heterogeneity in their groups was an advantage. One group leader described groups as a "cross-section of the clinic and of the neighborhood," and explained how this could serve to "strengthen the community":

> We've got a much older Hispanic woman. And she may not have a real connection with the young, Black primipara. But, there they are, in the same room, hanging out. So even if they may not look at each other and go, "Yeah, I totally understand what you're saying," they're still communicating by way of participating together.

Discussion

The women in this study experienced multiple social, family, emotional, and economic stressors. Women had problems with transportation and child care, demanding or unresponsive jobs, unemployment, financial insecurity, and homelessness. Many women also had difficult relationships with their babies' fathers, including infidelity, separations, and intimate partner violence. Some women had little or no family support, and families sometimes generated additional burdens. Furthermore, women's complex and chaotic circumstances deterred accessing health care and when attending clinic for traditional, individual care, they sometimes experienced long waits and intolerance for their delays. Some women also had uneasy relationships with their clinics and communities. Finally, pregnancy generated additional physical, social, and health care demands, as well as worries, as women anticipated birth and parenting.[13] Thus, pregnancy itself may have further increased women's stress.

Receiving prenatal care in a group, however, attenuated some of women's social stressors. Extended time in the group allowed women to strengthen their relationships with significant others, gain social support within their communities, to normalize their pregnancy-related concerns, and to feel less alone. Continuity of care allowed women to develop meaningful, supportive relationships with group leaders. By eliminating long waits, using women's time productively and providing women the opportunity to participate in care, GPNC provided sanctuary from some frustrations encountered in

receiving health care. Previously, GPNC has been reported to provide women with the opportunity to learn pregnancy-related health information, to change health behaviors, to gain control and confidence regarding pregnancy and birth, and to reduce anxiety.[13]

The findings from this study deepen our understanding of GPNC for low-income, minority women experiencing profound social stress. As noted earlier, GPNC has been demonstrated to reduce self-reported stress, social conflict, and postpartum-depression and to improve self-esteem in high-stress women.[11] These improved psychological and social outcomes are in themselves clearly beneficial for women, but reduced stress may also serve to mediate improved biological pregnancy outcomes, such as reductions in preterm birth for women who received GPNC.[10] Although explicit biologic mechanisms by which GPNC improves perinatal outcomes have not yet been elucidated, there are several theories about the effects of social and environmental factors on health that may apply to Centering. One model posits that stress induces a physiologic burden, known as "allostatic load," which leads to adverse health conditions.[1,5–7] Another hypothesis is that cumulative stress results in premature aging, or weathering, which may account for some racial and ethnic health disparities.[8,9] Multifaceted programs such as GPNC that target social stressors in pregnancy may help to reduce allostatic load or weathering, thereby improving women's health and pregnancy outcomes.

Nevertheless, it should also be noted that while GPNC addressed some problems, it may have created others. Because children's attendance is not recommended, women may have struggled to obtain babysitting, or may have not attended some sessions owing to lack of child care. Women who did bring children worried that they might disturb other group members.[13] In addition, because groups are scheduled for a predetermined time, women were unable to select convenient appointment times. The two-hour session duration was also problematic for some women with limited control over their transportation or daily schedule. Although group leaders understood these challenges and allowed late arrivals, early departures, and children in the groups, these accommodations could create disruptions in the group and challenges for group leaders.[23] Thus, despite the fact that GPNC appears to be a good fit for women with significant social stress, GPNC may have created certain challenges of its own, compared with individual care. On balance, however, it appears that for most women, the advantages of GPNC outweighed these problems.

While GPNC cannot solve women's social problems or eliminate their difficulties in accessing health care, the findings from this study suggest that GPNC may be able to attenuate a number of these stressors. However, GPNC cannot do this in isolation: although prenatal care offers a unique opportunity to improve women and children's health, in order to sustain these health benefits, GPNC must be set within a broader set of strategies to close health disparities in prenatal care and to provide comprehensive care throughout women's lives.[3,13,24,25] Programs such as group parenting and child care,[26] home visitation programs for new parents,[27,28] and integrated service programs that incorporate childbearing services, pediatric care and social services[3,29] might foster ongoing relationships between women and clinicians and build upon behavior changes that are introduced during prenatal care. Furthermore, although this study did not explore problems women might have encountered on the broader societal levels—such

as racism, sexism, neighborhood violence, environmental hazards, noise pollution or lack of local resources—it is plausible to think that low-income, minority women living in impoverished, inner-city neighborhoods have experienced considerable stressors in these domains. Even comprehensive health care programs that successfully reduce social and interpersonal stressors can provide only limited, short-term effects unless they are supported by policies and programs that address the fundamental societal determinants of health.[5,8,24]

Limitations and implications for future research. The limitations of this study included the limitations of the parent study, which have been reported elsewhere.[13] Participants had elected to received GPNC, and women who had multiple interviews had chosen to remain in the group over time. Thus, data may be biased toward more positive impressions of the benefits of GPNC. It is also possible that women who discontinued GPNC or who elected not to attend might have done so because their personal circumstances were too difficult to allow them to come to clinic at a predetermined time for two hours. If this is true, then this study's sample is skewed toward women with fewer social stressors and barriers to care, and these findings, therefore, understate the severity and complexity of women's social problems. The data from this study, while providing qualitative evidence that women's stressors are attenuated by receiving care in a group which may, in turn, reduce allostatic load and improve outcomes, do not demonstrate this effect. Therefore, conclusions must be drawn with caution. Furthermore, since the study was designed primarily to examine women's social contexts as they related to the experience of GPNC, this was not a systematic, in-depth exploration of these contexts. However, these incidental findings paint a picture of the complexities of women's lives, and suggest how GPNC may help.

Future research should be designed with the aim of systematically exploring pregnant women's social stressors in depth and as they relate to the advantages and disadvantages of GPNC. Such studies should be conducted in a variety of social and clinical settings. Additional prospective, longitudinal, randomized controlled studies examining the relationships among determinants of health, allostatic load, and perinatal and psychosocial outcomes are needed. The effects of providing GPNC to women with numerous social stressors on group leaders and on the way GPNC is implemented should also be examined. Finally, it is critical to understand why some women decline to receive GPNC and why, once some women attend groups, they elect to discontinue. If women with particularly challenging lives were unable to attend, this raises the concern that GPNC's potential to reduce social stressors, paradoxically, may be available only to women with sufficient resources to attend group sessions.

Conclusion. It appears that GPNC addresses several stressors in women's personal lives. Reducing these stressors may lead to improved pregnancy outcomes and experiences of receiving prenatal care for low income and minority women. However, more evidence is needed about whether these effects are demonstrated consistently throughout a wide range of settings, and if so, what mechanisms underlie these effects. If these effects are demonstrated, in order to sustain them over time, GPNC must be implemented in the context of other comprehensive health programs and in concert with policies that address the societal determinants of women's health across the lifespan.

Acknowledgments

We would like to thank Sally S. Cohen for her extensive help in developing the parent study and her comments on an earlier version of this manuscript. We would also like to thank the midwives and administrators who facilitated this research, and the women and group members who participated in this project. This project was funded in part by the National Institute of Nursing Research, T32NR008346 and F31NR00991. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Nursing Research or the National Institutes of Health. Additional funding was provided by the following: March of Dimes Graduate Nursing Fellowship; Sigma Theta Tau International Research Grant; and the Evelyn Anderson Research Fund Award, Yale School of Nursing.

Notes

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