"I Wasn't Alone"—A Study of Group Prenatal Care in the Military

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The military has recognized that health and quality of life for service members are closely tied to the resources for their families, including how they are cared for during pregnancy and childbirth. However, there has been little examination of women's experience with different models of prenatal care (PNC) in military settings. The purpose of this article is to describe the results of a qualitative study of women's experiences with the CenteringPregnancy model of group PNC compared to individual PNC in two military health care settings. This clinical trial enrolled 322 women who were randomized into group or individual PNC at two military treatment facilities. Qualitative interviews were completed with 234 women during the postpartum period. Interpretative narrative and thematic analysis was used to identify three themes: 1) ''I wasn't alone''—the experience with group PNC; 2) ''I liked it but…''—recommendations to improve group PNC; and 3) ''They really need to listen''—general concerns across the sample about PNC. Greatest concerns of women in individual PNC included lack of continuity and time with the provider. Our military families must be assured that their health care system meets their needs through personal and family-centered care. Group PNC offers the potential for continuity of provider while also offering community with other women. In the process, women gain knowledge and power as a health care consumer. J Midwifery Womens Health 2009;54:176–183 © 2009 by the American College of Nurse-Midwives.

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INTRODUCTION

The United States has designated broad goals for the nation's health through the *Healthy People 2010* objectives.[1] In line with these goals, the military has recognized that health and quality of life for service members are closely tied to the resources for their families.[2] These are intimately linked to what is known as military family readiness. In short, if a service member is distracted about his or her family's quality of life, then efficiency, productivity, and safety are compromised. A study on the impact of TRICARE (military-managed health care) on military preparedness documented concerns of service members, veterans, and providers.[3] One summed it up with brutal honesty, ''I can tell you, people won't put their life on the line if they're worried about the family they're leaving behind.'' Many families in our Armed Forces are young and bear children during their military service. Competent, respectful, and accessible health care is an essential need and right; military families must be assured that their health care system meets their needs through personal and family-centered care. The purpose of this article is to describe the results of a qualitative study of women's experiences with the CenteringPregnancy model of group prenatal care compared to individual prenatal care in two military health care settings.

Background

Pregnancy-related care accounts for approximately 40% of the TRICARE budget. There are 2.34 million women eligible for TRICARE services. Of these, 250,000 are on active duty, and there are 90,000 births to military families each year.[4] This translates to roughly 1 million prenatal visits per year. In general, perinatal outcomes are no better for women cared for in military health care systems than for the rest of the United States, which ranks among the bottom of industrial nations.[5] Of particular concern is the fact that active duty women are at increased risk for cesarean birth, operative vaginal delivery, pregnancy-induced hypertension, preterm labor, maternal transport, intrauterine growth restriction, intrauterine fetal death, postpartum hemorrhage, placenta previa, and less than optimal Apgar scores.[6–10]

Prenatal care (PNC) has often been publicized as a solution to poor pregnancy outcomes, but current models are not necessarily effective. Strong[11] contends that our current systems of PNC lack evidence and do not serve childbearing families well. Lu et al.[12] note that PNC is currently ineffective in preventing prematurity or low birth weight.

Women's perceptions of PNC vary across different research inquiries. A Department of Defense childbirth survey gathered self-reported data from 2124 women who received birth care at 44 military hospitals.[13] Less than half said that they would recommend military health care

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to their family or friends. Cited concerns were availability of staff, confidence and trust in the provider, information and education, and lack of respectful, dignified, and courteous care. Numerous researchers have also found that women value receiving adequate prenatal information.[14–20]

An evaluation of how care is provided is more complex. Research demonstrates that respect is a valued attribute of PNC.[13] A qualitative study of 50 women's experiences with PNC in Austria found that a significant amount were dissatisfied with provider's attitudes, the amount of information received, and lack of communication and psychological support.[16] Raube et al.[21] found a strong relationship between satisfaction with care with concern demonstrated by providers and information provided. There is evidence that women desire a relationship with their provider,[14,22–24] involvement of their families,[24] and adequate time for their concerns to be heard.[18,25] Dye and Wojtowycz[26] found that women's satisfaction with care was directly related to amount of time spent with the provider and length of waiting time. Finally, a woman is more likely to be satisfied with her care when she sees fewer providers during her prenatal course.[27]

Many have challenged the notion that PNC can be evaluated merely by the number of visits or the content provided.[28–31] Rooks[31] noted the difficulties of managed care where time constraints make it almost impossible to develop a trusting relationship with the woman. McCloskey et al.[32] documented midwives' concerns of decreasing quality of services as a result of Medicaid managed care, partly because of a lack of time with women. These studies provide evidence that current strategies are not achieving the desired impact and emphasize the need to test alternative models.

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The CenteringPregnancy model challenges PNC providers to think outside of the established patterns of current PNC models in the United States.[33] The premise of the CenteringPregnancy model is that by receiving PNC and education through a supportive group process, women gain power and confidence as knowledgeable health consumers, increased personal and maternal self-efficacy, and strengthened community networks.[30] These are important factors when considering the challenging tasks of motherhood and parenting in the military family. A growing body of research suggests that women who receive care via this model have a significant risk reduction in rates of preterm birth,[34] higher satisfaction with care,[35] higher levels of pregnancy knowledge,[36] and fewer emergency room visits, operative births, labor inductions and augmentations, and use of medications in childbirth compared to women receiving individual PNC.[30,37]

In the CenteringPregnancy model, groups of 8 to 12 women of similar gestational age attend 10 2-hour sessions that begin around 12 to 16 weeks of pregnancy and conclude with an early postpartum reunion. Within the group space, women learn self-care skills, including weight and blood pressure measurement, and are taught to record these data in their chart. Each woman receives a 3- to 5-minute individual physical assessment on a mat in the room from the responsible provider. The women then meet together as a group, facilitated by the provider and an assistant, to discuss issues of pregnancy, childbirth, and parenting. It is this group interaction that provides opportunity for women to discuss their needs, dispel myths about pregnancy and birth, and provide education. The CenteringPregnancy model (Figure 1) is based on a set of 10 essential elements that guide the provision of care. Although a randomized clinical trial of the CenteringPregnancy model[34] has demonstrated significant improvement in clinical outcomes, to date there has been no systematic examination of women's experience with the model. This paper presents a narrative analysis comparing women's experiences with group PNC to individual PNC in two military settings.

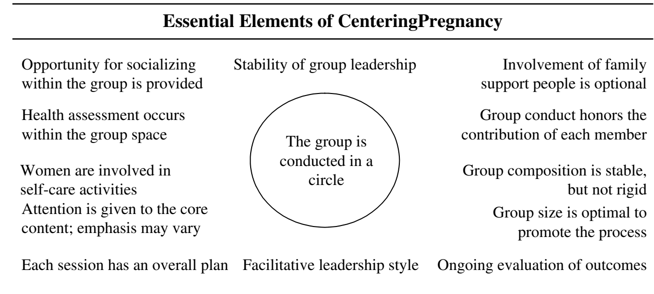

Figure 1. Essential elements of CenteringPregnancy.

METHODS

Research Design

This randomized clinical trial compared individual PNC with group PNC. The study received ethical approval from the University of California San Francisco Committee on Human Research and regional Investigational Review Boards of the US Navy and US Air Force.

Setting and Sample

A US Air Force base on the Eastern seaboard and a US Navy hospital in the Pacific Northwest were selected for the trial. Staff members (certified nurse-midwives [CNMs], women's health nurse practitioners, registered nurses, licensed practical nurses, medical technicians/hospital corpsmen, and clerks) from both sites attended a 2-day CenteringPregnancy model workshop. Low-risk women entering PNC were offered the opportunity to be enrolled into the study. Both individual care (control) and group care (intervention) were described, and women were informed about their time commitment in the study by a research assistant who was not part of the prenatal clinic staff. After informed, written consent was obtained, women were enrolled and randomized in blocks of four to individual or group PNC.

Data Collection

This paper presents the results from a semistructured qualitative telephone interview conducted at 3 months postpartum. Women were asked to comment on what they liked most and least about their PNC, what they would change about their experience, and anything else they wanted to share. Most women naturally provided examples and stories of their experience; if they did not, probes were introduced to gain further description of their experience. Interviews lasted 15 to 60 minutes. Women gave permission to be recontacted for clarification if needed, which was done with several participants during the analysis. Group integrity was evaluated by field notes kept for each session. The principal investigator and consultants made two site visits to observe group sessions and talk with the women in the groups. Observations were made to evaluate the adherence of the groups to the essential elements of the CenteringPregnancy model.

Data Analysis

Interviews were transcribed verbatim and entered into ATLAS.ti (version 5.0; ATLAS.ti GmbH, Berlin, Germany) a computer software program that permits robust management of qualitative datasets and provides an audit trail for coding, memos, and analytic decisions.[38] Each interview was coded and analyzed for narrative content using an interpretative lens to describe and draw inferences about their PNC experience. Techniques in story analysis were used to guide the interpretation of the data, including the following: describing the consistent narratives, interpreting their meaning, connecting the findings to what is currently known about practice, and identifying new knowledge and implications for practice and research.[39] The principal investigator (H.P.K.) analyzed the first two interviews with a team member to develop initial codes and to discuss the specific analytic strategies. The next two interviews were coded independently to assess consistency in interpretation of the narratives and to achieve coding clarification. The team then completed the rest of the coding and analysis. Extensive memos were kept at each level of analysis to provide structure and rationale for decisions on coding and interpretation. A thematic analysis completed the process and was then reviewed with the full research team for their input and clarification.

RESULTS

A total of 322 women were enrolled in the study; 234 (73%) completed the final 3-month postpartum interview, a robust number considering the highly mobile nature of military populations. Table 1 presents the sample characteristics. The groups were equally matched on all but three characteristics. Women in individual PNC had slightly more college education, and women in group PNC were somewhat more likely to be nulliparous or living with a partner. The average age across groups was 25 years (standard deviation = 5.29 yrs), and most participants were married. The ethnic/racial characteristics were representative of the US military. More than one-third were on active military service. One half of the total sample was eligible for the Women and Infants (WIC) supplemental nutrition program, and 41% experienced the deployment of a family member during the pregnancy or postpartum period.

Women assigned to group PNC spent the majority of their interview talking about their PNC. Most of the concerns they raised were related to other aspects of care, such as labor and birth experiences or difficulties with the health care system in general. In contrast, women in individual PNC tended to have shorter interviews and talked equally about their prenatal and birth care experiences. A number of them commented on the fact that group care was available—some wished they could have been assigned to it, while others were happy to be in individual PNC.

The women's comments and narratives were clustered into three overarching themes: 1) "I wasn't alone"—the experience with group PNC; 2) "I liked it but…"—recommendations to improve group PNC; and 3) "They really need to listen"—general concerns across the sample about their childbearing care. Overall, there was high enthusiasm for group care from most, but not all participants.

Table 1. Characteristics of the Sample of Women Receiving Group and Individual Prenatal Care in Two Military Hospitals (N = 322)

Characteristic	% (n) Group PNC	Individual PNC
Race		
African American	18.4 (29)	19.0 (30)
Latina	10.8 (17)	8.9 (14)
White	59.2 (92)	60.1 (95)
Asian/Pacific Islander	5.7 (9)	5.1 (8)
Other	7.0 (11)	7.0 (11)
Age (yrs)		
Mean ± SD (range, 18–42)	25.0 ± 4.9	25.5 ± 5.4
Parity[a]		
Nulliparous	59.2 (77)	45.9 (61)
Education[a]		
Less than high school	3.5 (5)	5.6 (8)
High school	35 (50)	21.1 (30)
Some college	47.6 (68)	50.0 (71)
College completed	9.8 (14)	12.7 (18)
Graduate school	4.2 (6)	10.6 (15)
Family status[a]		
Single	10.8 (17)	9.5 (15)
Married	74.5 (117)	82.9 (131)
Divorced/separated/other	2.5 (4)	3.8 (6)
Partnered	12.1 (19)	3.8 (6)
Military status		
Active duty	40.8 (64)	32.3 (51)
Dependant	54.8 (86)	65.2 (103)
Other	4.5 (7)	2.5 (4)
US military branch		
Army	12.9 (20)	9.6 (15)
Navy	61.9 (96)	66.9 (105)
Air Force	20.6 (32)	19.7 (31)
Marine Corps/Coast Guard	4.5 (7)	3.8 (6)
Military rank (self or partner)		
Enlisted grades 1-4	51.6 (80)	43.8 (67)
Enlisted grades > 5	39.4 (61)	43.1 (66)
Commissioned/warrant officers	9.0 (14)	13.1 (20)
WIC eligible	50.3 (77)	47.9 (69)

PNC = prenatal care; WIC = Women, Infants, and Children (special supplemental nutrition program).

[a]There were slightly more women with college education in individual PNC ($P = .02$) and more nulliparas ($P = .04$) and women living with partners ($P = .05$) in group PNC.

Five women said they would not do group PNC again, and one woman transferred out of group PNC to individual PNC.

"I Wasn't Alone"—The Experience With Group PNC

Women in group PNC overwhelmingly liked two things most. They were delighted, and often surprised, that they were not the only ones experiencing common discomforts, worries, or other nuisances that can accompany pregnancy. Most truly liked being with other women and enjoyed hearing their stories. Even women who initially felt shy about group PNC commented on the positive sharing with other women:

> *"I was 'iffy' about going in it—I'm not really a person that talks about things going on with me. I've never done a group thing. But it was nice to see that you could talk about hemorrhoids. I was surprised that so many women were going through the same things I was. For example, we talked about the tenderness of your breasts—you know, sometimes you can't even touch them, and you sure don't want HIM touching them—so many women were going through it, too. It was a surprise: you just don't discuss these things with people, not even friends."*

The majority of women in group PNC liked the sense of community and friendship, which made them feel like they were not alone, even when far from family. They valued the other women's voices and expertise and the support:

> *"I loved being with the women, hearing the experiences of the new mothers. It was really great. I learned a ton of things I would never have thought about. Things that you could never read in a book. Life experiences. I've stayed in touch with two of the women: I do their hair and we keep in touch and get together."*

Women in group PNC were generally more likely to talk about how much they learned compared to women in individual PNC. This was true even for multiparous women; as one said, "I didn't think I would learn anything because this is my third [child], but I learned a lot!" Continuity of care was valued by both groups, but was consistently noted as a positive aspect by those in group PNC. They felt respected and enjoyed participating in their care by weighing themselves, taking their own blood pressure, and charting in the medical record. "I liked the B/P. You didn't feel like cattle—it put ME in control." Gradually, women realized they were gaining power and confidence as health care consumers:

> *"I felt much freer to voice my opinions during the labor then I think I would have if I hadn't gone through the group. That was very different, especially in the military system. A lot of times you feel lost and don't have empowerment. The group definitely gave that to you—it made you feel like you could get something done."*

No fathers were interviewed in this study, but many of the women talked about their partners' experiences with group PNC. Although some women noted that several men were uncomfortable with the more intimate discussions, such as vaginal discharge, others talked about the positive aspects for the fathers:

> *"It was good for the husbands. They all came and it was nice [that] they were included…my husband liked it because before he had to wait in the waiting room and now he was involved. He became friends*

with the other men—they would go out and play basketball together, and probably talked about us (laughing). They would come back to group and talk about how the pregnancy was affecting them, dealing with our mood swings. It was fun to hear how he felt—I never knew he was thinking those things. It made our relationship better. You really got to know how they felt."

"I Liked it But…"—Recommendations to Improve Group PNC

Although the majority of the women liked group PNC, they gave careful consideration to the question of what would make their PNC experience better. Many said they would not change anything and that all women should be afforded the opportunity to have this kind of care. The most common voiced concerns were having enough personal time with the provider and privacy. As one group PNC member phrased it, "Mat time—always had people waiting so sometimes I felt rushed and couldn't ask what I needed to." They made suggestions on what they thought would address these concerns:

"[It might be a] better setting if mat time were a little more private. In some ways, it made me feel better because I didn't need help to get off the mat. [It] made some of the ladies who gained more weight uncomfortable. I don't have a problem with my husband seeing all of that, but another husband doesn't need to see my big basketball. More [privacy] would be better. More screens."

As mentioned previously, not all of the fathers were comfortable with the intimate conversations, and some of the women thought the facilitators should handle those situations with a bit more finesse. Several of the women believed there should actually be arrangements for fathers to have time on their own to meet their special needs:

"I would make time for the dads to get together. It's a big change for the husbands and a lot of times they feel neglected. They might be more supportive to us if they knew that other husbands were feeling the same way and experiencing the same things."

Other suggestions included each woman having one individual appointment scheduled during the course of the pregnancy: "As a first-time mom, you need more reassurance to talk with a caregiver. Or perhaps have an open time where you can go in—perhaps before or after to talk with them." Many wanted more intensive preparation for the labor and birth and parenting. They all enjoyed the healthy snacks provided, but sometimes there was not enough to go around. One participant suggested that "More money [be] allocated for food during group. It's hard to have a small table of food with a bunch of hungry pregnant women around."

"They Really Need to Listen"—General Concerns About PNC

This theme presents women's experience of individual PNC and general concerns raised by women in both groups. The strongest concerns raised by women in individual PNC (in contrast to women in group PNC) were lack of continuity and choice of provider, lack of time with the provider, difficulty getting prenatal appointments, accessibility of the provider between visits, and needing more information:

"I definitely would have liked to have seen one person during my prenatal care—I saw four different people, which led to the need to reexplain things to someone new. I felt rushed…it was in and out really quick. They could have listened to the heartbeat a little longer."

Feeling rushed made many women feel like their needs were not being heard. One active duty woman in individual PNC developed hypertension late in the pregnancy. When asked what she would change, she said:

"It would have to be [that] the provider listens when the patient comes in: we know our bodies, and when something is wrong, it is wrong. I swelled up like the marshmallow man in Ghostbusters. No one would take me off of my feet."

Some active duty women perceived that their special needs and work issues were not taken into consideration by their providers:

"Sick call—you have to be dying before they let you off work. Everyone who was pregnant with me either delivered early or had complications."

Women in individual PNC waited 13 minutes (range, 0–60 min) compared to an average wait of 3 minutes (range, 0–16 min) for those in group PNC. Women in both groups commented on the less than helpful front desk staff: "You would have to wait for a really long time on the phone or for them to call back. And then it felt like they just brushed you off."

Thirty women (13%) made comments that questioned the competence of their providers. Two-thirds of these women were in individual PNC, and most of their concerns (80%) were about their care during childbirth, particularly with inexperienced providers. Of those that expressed concerns about their PNC, most were about missed laboratory values, and all but one were enrolled in individual PNC.

Child care issues were experienced by both groups. Rambunctious children were generally found to be distracting in group PNC. Women in individual PNC experienced difficulty in bringing children to the clinic and believed that there should be places to leave them during their appointments:

"On my first visit, they encouraged me to bring my family. But then the first time I brought my 2-year-old, the nurse gave me the worst look; they had told

me it was okay. So they said they were family-centered, but they really weren't."

Concerns were expressed by both groups on how several screening studies were ordered. Both settings adhered to the evidence-based guidelines for ordering ultrasounds, but women believed that they received fewer assessments than their friends in civilian care:

> *"I wanted to go out in town and get a sonogram and they wouldn't give me a referral. They don't think it's important for me to know the sex of the baby. He was deployed during the pregnancy and birth. The only answer I got was that it wasn't their policy if it wasn't medically indicated. It didn't bother me with my first child, but it bothered me this time because he was away."*

They also made comments that suggested they thought the military was scrimping, even when adhering to certain evidence-based practices, such as when asked to obtain their own group B streptococcus (GBS) specimen:

> *"I felt that they cut corners with things to save money. For example, the GBS swab: we were told we had to do it ourselves and then take it to the lab. It just felt weird. In the civilian world, they do it for you. I checked with my friends and my sister, who is a nurse, and they agreed that isn't the way they usually do it."*

DISCUSSION

Military families are a unique subset of US society. Women eligible for military health care are at increased risk for experiencing stress and lack of social support, which have been associated with poor perinatal health behaviors and outcomes. The health care system is challenged with improving efficiency while maintaining a quality program at a reasonable cost. The results of this qualitative study support other studies of military women's experience of PNC, which document their desire for quality care and consistency of provider. It also raises some new findings with implications for practice and research.[40,41]

Women overwhelmingly desired continuity with their provider. Continuity of care has demonstrated beneficial outcomes for both mother and infant. A systematic review conducted by the Cochrane collaboration suggests that the way PNC (continuity and noncontinuity care) is conducted is associated with specific pregnancy outcomes.[42] Women cared for in the continuity model were less likely to experience an antenatal admission, more likely to attend antenatal education programs, less likely to have infants requiring resuscitation, and more likely to be satisfied with their care. Continuity of care implies potential for a relationship to develop between the woman and the provider and this may influence outcomes.[22,28,43]

It was clear from our data that women in group PNC liked the CenteringPregnancy model, but some also identified a desire to have more individual time with the provider and more privacy. They made practical suggestions that could be incorporated into the model. Women in group PNC felt respected for their personal expertise and believed they learned a lot about their bodies. They also realized they were not alone and gained power as a health care consumer. Our findings support recent studies on the CenteringPregnancy model where women had high levels of satisfaction and knowledge of pregnancy.[36,37,44] Several hypotheses can be posed from this inductive study for the decreasing preterm birth rate observed among CenteringPregnancy model clients in the randomized clinical trial conducted by Ickovics et al.[34] First, as women gain more knowledge and self-confidence, they become more in tune with the changes happening with their bodies and more engaged with the health care system. Second, the social support of group PNC might also decrease stress and anxiety related to increased knowledge and increased relational support, which could serve as a potential mediator for the observed decrease in preterm birth.

The voices of the active duty women were often the most poignant. As with many of the women in the study, they were often far from home. Many of the junior enlisted women found that they could obtain little accommodation for some of the fatigue and discomfort that can accompany pregnancy. It is not possible to just take a day off in the military. A number of studies have been conducted on the outcomes of pregnancy in military populations and have found higher numbers of pregnancy complications, with disparities among ethnic groups.[6–8,10] Assigning causation to preterm birth is complex, but many enlisted personnel hold labor-intensive jobs. The comments of the young enlisted women were provocative as they described the number of complications of the other women in their units. Further investigation is warranted to find out how best to meet the needs of this specific group of women.

The women in this study are no different than others who want to be respected and valued. Telephone accessibility and respectful communication skills appeared to be a concern for women in both settings. This may be related to a lack of training, inadequate resources, or both. Finally, the women's comments about the use of evidence to guide screening tests were interesting and applicable to all who provide PNC. Both settings in this study adhered to the Department of Defense/Veterans' Administration guidelines[45] for ultrasound screening. As providers strive to practice evidence-based care, they need to carefully explain the risks and benefits to each woman and evaluate with her when social needs outweigh the evidence.

This study had several limitations. Although our aim was to understand women's experiences of group PNC compared to individual PNC, this required teasing out certain concepts, such as respect and continuity, to understand if they were related to the type of PNC or the

health care system in general. Just because women were in group PNC did not mean they were pleased about their entire experience or vice versa. The research team tried to stay close to the narratives about the PNC experience, but also believed they had an ethical responsibility to report on other concerns raised by the women. The PNC providers in both settings provided group PNC and individual PNC; therefore, women's evaluation in some aspects may have been of their ''individual provider'' characteristics and actions versus the actual model of care. However, women's perceptions of feeling respected and having continuity with their provider was far more dominant in group PNC. These qualitative findings are limited to these two particular military settings, but do present areas for future study and considerations for practice. Fathers' and partners' experience with group PNC should be explored. Providers' experiences were gathered as part of this larger study and will be published elsewhere. The findings should be considered as the CenteringPregnancy model is further refined. The study's strength was to give women a place to evaluate their experience where their voice was protected and they were not identified to the provider. Their highly positive review of their experiences suggests that it is a powerful approach to PNC.

CONCLUSION

The CenteringPregnancy model shows promise in revolutionizing PNC from its traditional practice in the United States. As always, care should be tailored and customized to each woman's needs, whether or not it occurs in a group space or in an individual office—her voice needs to be heard. The model promises movement toward the family-centered care. Refinement and evaluation of the model should continue; however, based on these findings, and coupled with the strong evidence from a randomized controlled trial, it should be considered as an effective approach to PNC.

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