Published in final edited form as:
J Midwifery Womens Health. 2009 ; 54(3): 226–237. doi:10.1016/j.jmwh.2009.02.003.

Women's Experience of Prenatal Care: An Integrative Review

Gina Novick, CNM, MSN
Yale University School of Nursing, New Haven, CT

Abstract

Objectives—To identify, synthesize and critically analyze published research on women's experiences of prenatal care.

Methods—A search of online databases and relevant citations for research published from 1996−2007 was conducted. Thirty-six articles were reviewed. Qualitative analysis methods were used, assisted by research software.

Results—Some women were treated respectfully and reported comprehensive, individualized care. However, some women experienced long waits and rushed visits, and perceived prenatal care as mechanistic or harsh. Women's preferences included reasonable waits, unhurried visits, continuity, flexibility, comprehensive care, meeting with other pregnant women in groups, developing meaningful relationships with professionals, and becoming more active participants in care. Some low income and minority women experienced discrimination or stereotyping as well as external barriers to care.

Conclusions—Further research is recommended to understand women's experiences and to develop and implement evidence-based, women-centered approaches. Clinicians should inquire regarding women's needs and modify care accordingly and also advocate for institutional changes that reduce barriers to care. Implementing comprehensive, redesigned models of care may be one effective way to simultaneously address a variety of women's needs and preferences. If prenatal care becomes more attractive as well as more accessible, women's experience and pregnancy outcomes may both improve.

Prenatal care is one of the most common health interventions in the United States.[1, 2] With approximately 50 million prenatal visits annually,[2] it is often viewed as indispensable for assuring healthy pregnancy outcomes.[3-5] Nonetheless, prenatal care (PNC) has produced disappointing results for the U.S.,[1, 6] including an international ranking of 29th among industrialized nations in infant mortality,[7] and rising rates of low birth weight and preterm birth.[8] These critical health indicators are especially poor among certain minority and low income groups.[8, 9]

As researchers seek for etiologies and interventions to improve these distressing outcomes, recognition is growing that they may result from a cluster of interwoven problems. These include psychosocial and behavioral factors, environmental exposures, pre-pregnancy medical conditions, stress, racism and poverty. This awareness has led to recommendations for

---

Contact information: Address: 65 Wright Lane, Hamden, CT 06517 gina.novick@yale.edu.

Précis: Women reported varied experiences of, and mixed reactions to, prenatal care. Frustrations were evident for low income and minority women.

developing women-centered approaches to PNC that address women's health more broadly, provide individualized care, and promote women's active participation in care.[6, 10-14]

If PNC is redesigned to meet women's needs, then it is critical to develop a clear understanding of women's PNC experiences, how women define their own needs, and which aspects of PNC meet their needs. Given well-documented racial and ethnic disparities in outcomes and utilization of PNC in the U.S.,[9, 13, 15] this may be particularly beneficial for women from low income and minority groups, who may encounter many social, economic and environmental challenges. Yet, there has been little attention to acquiring this knowledge, particularly when contrasted with efforts to discover medical etiologies of poor neonatal outcomes and to increase PNC utilization.

The intent of this article is to provide a critical synthesis of research on women's PNC experiences that will illuminate gaps in knowledge and provide direction for further research. It may also inform maternal-child health policy development, assist in meeting objectives for reducing health disparities, and enable clinicians to modify care to more adequately meet women's needs.

BACKGROUND

Prenatal care in the U.S. typically consists of approximately 12 individual visits.[2] After an in-depth history and physical examination, return visits include measurement of blood pressure and weight, abdominal examination to assess fetal growth and position and document the fetal heart rate, and referrals for laboratory testing and ultrasounds.[2] Objectives of PNC include risk assessment and reduction, health education, and psychological support,[2, 9] but since typical return appointments last only 10–15 minutes,[16] clinicians may need to focus primarily on bio-medical issues. Consequently, women are often referred to childbirth classes[17] or separate social, psychological or nutritional services. These services may not be available on-site or covered by insurance, and therefore, women with financial or transportation difficulties may not receive them.

An alternative model of group PNC has been implemented in over 300 sites (Rising, SS, e-mail communication, May 15, 2008). After the initial individual visit, women and their significant others attend 8–10 sessions throughout pregnancy, lasting 90–120 minutes. Women perform self-assessment of weight and blood pressure, and a clinician provides individual physical examinations followed by facilitated group discussion on a variety of health topics.[14, 16]

METHODS

This integrative review synthesized research published in English between 1997 and 2007 with data collected after 1989 on the topic of women's experience of PNC. The term “experience” denotes: 1) participation in or undergoing events or processes, and 2) the subjective perception of these events.[18]

A search of Medline, CINAHL, PsychINFO, ISI Web of Knowledge, SCOPUS and Social Science Full Text was conducted. Search terms were selected to generate an overview of women's experience of PNC. The terms, used alone and in combination, were: prenatal care, antenatal care, experience, perception, personal satisfaction, attitude to health, and *patient satisfaction*.

After reviewing several hundred abstracts, inclusion/exclusion criteria were developed to identify literature that: 1) was relevant to a significant proportion of the U.S. population, 2) examined women's overall experience of PNC, and 3) was as diverse as possible while allowing sufficient comparability between articles to permit synthesis.[19] The first criterion was operationalized by including articles with samples from ethnic or racial minority groups that represented over 10% of the U.S. population in 2008. Therefore, articles were included only if data had been collected on Caucasian (66%), African-American (14%) or Hispanic (15%) women or on racially and ethnically mixed samples.[20] The second criterion was operationalized by excluding articles that focused narrowly on specific aspects of care (e.g., women's experience of receiving abnormal genetic test results). The third criterion was operationalized by including studies only if they reported research that had been conducted research in the U.S (N=22), England (N=7), Australia (N=3), Scotland (N=1), Canada (N=2), and New Zealand (N=1). U.S. and foreign articles investigated similar topics, and findings did not differ radically. Finally, methodologic quality, or rigor, was not an inclusion criterion. Rather, inclusion was based on the relevance of questions asked and findings reported.[19]

Articles were organized chronologically by publication date, abstracted, indexed and displayed in matrices.[21] A descriptive qualitative analysis[22] was conducted, assisted by ATLAS.ti qualitative research software. The approach was developed to systematically and critically analyze diverse sources while minimizing inaccuracy and bias.[23]

First, important quantitative results and/or qualitative findings of each article were summarized in separate documents, including illustrative statistics or quotes. Summaries were re-read to generate a provisional code list[22] based on key findings of the studies as they related to women's experience of care. Summaries then were entered into ATLAS.ti and coded as primary documents, using both provisional and inductively-developed codes. Next, codes were examined to develop groupings and uncover themes. Themes were developed from robust findings on topics that illuminated women's experience of PNC. Identified themes had findings reported in six or more articles.

FINDINGS

Six major themes, or *Features of Care*, emerged: 1) Incentives/Barriers, 2) PNC Setting, 3) Time Spent, 4) Components of Care, 5) Relationships with Staff and Clinicians, and 6) Receipt of Information (Table 1). These *Features* or themes will be discussed in terms of 1) what women reported as being present and/or occurring during care, and 2) women's perceptions, reactions, and preferences regarding these features.

Sixty-seven articles were retrieved. Thirty-six studies met the selection criteria specified above and were reviewed (Table 2). Twenty-seven of the 36 studies used quantitative methods; 6 of these were randomized controlled studies (RCTs). Nine studies employed exclusively qualitative approaches and 8 studies used mixed methods. Twenty-three articles reported samples consisting primarily of low income women. The majority of women in 16 studies were African-American and/or Latina. Sample sizes in quantitative studies ranged from 40 to 1,933 and in qualitative studies from 10 to 106. Thirty-four studies researched individual care; two researched both group and individual PNC.

Theme 1: Incentives/Barriers

Sixteen of the 36 studies reported women's reasons for, perceived benefits of, or barriers to, receiving PNC. Reasons or benefits included improving pregnancy outcomes,[3, 24, 25] receiving regular checkups,[26] and hearing the baby's heartbeat.[3, 24] Two studies reported that women liked ultrasounds[26] and believed they helped ensure healthy babies.[24] Other benefits included receiving information on the baby's health[5, 27] or gender,[5] learning good health habits, and preparation for labor.[27] PNC provided an opportunity to socialize, gave women a break from children,[4] and reduced stress[28] and loneliness.[29] However, some women feared tests and exams,[27] disliked “constant checkups,”[3] or thought PNC unnecessary.[3] A belief in the value of PNC was associated with higher satisfaction with care.[30]

Several factors deterred PNC attendance. While these problems were not universal,[31] they included transportation,[3, 32, 33] substance abuse,[3] receiving drug treatment,[34] incarceration of the baby's father,[34] lack of child care,[3] lack of insurance[35] or simply having “too many other problems.”[3] Reported satisfaction was higher when women experienced fewer external barriers[30, 33] or if PNC included transportation and babysitting.[36]

Theme 2: Prenatal Care Setting

Nine studies reported experiences of physical setting or atmosphere of PNC. Low income women in two studies liked their settings,[24, 30] but women in a third did not.[37] Participants in two focus group studies wanted PNC in clean settings[24, 25] with children's play areas.[24] Women disliked when privacy was lacking.[38]

Women desired relaxed,[39] interactive,[4] informal[4, 25] environments, appointment scheduling that allowed significant others to attend,[40] and tolerance of staff toward children.[24] Some women disliked when partners were excluded from examinations.[28]

Theme 3: Time Spent

Twenty-two, or nearly two thirds of the articles reported on time spent obtaining PNC. Results from one focus group study [25] and three surveys (combined N=2,116)[30, 41, 42] collectively suggest that women preferred waits under 30 minutes, and when this occurred, women were more satisfied with care.

While women were not always distressed about wait times, several studies revealed that women experienced long waits.[3, 26, 32, 33, 36-38, 40, 43] One study reported that one third of participants waited 60 minutes or more and found this unpleasant.[32] Participants in another study felt they spent too long in clinic, with some spending four hours.[28] Mean wait time in one study of 364 women was 51.5 minutes and 49.5% of women waiting over 60 minutes were dissatisfied with care compared with 10% of women waiting under 14 minutes.[43]

Women also desired unhurried visits.[5] When clinicians spent time with women, it fostered trust[35] and increased overall care ratings.[41] Yet, many women reported rushed visits,[26, 35, 40, 44, 45] which were associated with decreased satisfaction with PNC in two studies.[43, 46] In a third study, however, women who spent over 15 minutes with practitioners were not more satisfied than those who spent under 15 minutes.[42]

The ratios of times that women spent receiving care (ratio of travel time to visit time, ratio of wait time to visit time, and ratio of travel plus wait time to visit time) also affected their experience. For all these ratios, dissatisfaction with PNC increased as the ratio increased.[43] Qualitative comments in two studies indicated that women were unhappy with long waits for brief visits.[24, 47]

Finally, women wanted respect for their time when receiving PNC. More specifically, they disliked first-come, first-served “block” appointments,[24] arriving and learning that the physician was delivering a baby and would not be in clinic, or being penalized when they arrived a few minutes late.[24] Women also wanted explanations about delays.[25]

Theme 4: Components of Care

Components of Care consisted of three sub-features: *Continuity*, *Comprehensiveness and Control.* Twenty-seven studies reported findings on these components.

Continuity—The term "continuity" is used in several different ways in the literature reviewed. It can denote continuity of carer, which in turn may signify either a single designated, primary clinician or a small group of clinicians. "Continuity" also can denote care that prioritizes consistency of approach, regardless of number of clinicians. Finally, the term "continuity" can refer to care within or between antepartum, intrapartum or postpartum periods. Findings reported here refer to continuity of care or carer within PNC. Twelve articles reported on continuity.

Women liked, wanted, or were more satisfied with PNC provided by a designated primary clinician.[24, 25, 33, 36, 48, 49] In one survey (N=1,137), 88% of respondents indicated that this was important.[48] Women who had one provider reported in focus groups that they felt more trusting and willing to follow clinician advice.[35] In another study (N=1,219), women who saw one clinician had a greater likelihood of being satisfied with overall care, clinician advice, respect, and time with provider than women who had seen multiple clinicians.[33] Women who had a primary clinician rated the importance of continuity more highly than women who had more than one clinician.[48, 50]

Yet some women did not see the same clinician more than once.[40] If women understood in advance that they would see multiple clinicians, they were more accepting, especially if clinicians shared information.[24] Focus group participants appreciated when PNC providers knew and remembered them.[25] Women in an RCT (N=200)[51] were more satisfied with explanations and midwife behaviors when continuity was prioritized by a small group of clinicians, and women in a survey (N=1,616)[41] were more likely to rate PNC highly when they felt that providers knew them. Nurse case managers[37] and lay health workers[35] also helped to provide continuity.

Comprehensiveness—Comprehensive care includes or facilitates access to non-medical services such as psychological and social services, drug treatment, childbirth education, and peer support.[1] Half of the reviewed articles reported on this feature.

Women valued information about childbirth,[24, 25, 31, 39, 52] psychosocial assessments[53] and counseling services,[31] and the opportunity to chat informally about concerns.[25, 32] When PNC was comprehensive, women generally reacted more positively to care.[28, 30, 34, 36, 39, 42, 54] However, women sometimes felt they needed more information regarding available services.[25, 28] Women whose care had included ancillary services plus nurse coordination of care were more satisfied compared with women who received comparable services without coordination.[37] Lay health workers who coordinated services were also seen as helpful.[35]

Women requested the opportunity to talk with other pregnant women in groups.[24] Two RCTs examined peer group support. Subjects randomized to PNC augmented with peer group sessions were more satisfied with care than women who had received routine care (N=617),[36] and women randomized to group PNC also reported greater satisfaction with PNC than women who had individual care (N=1,047).[54] Peer groups provided support,[4, 31] helped women feel that their problems were not "crazy"[4] or unique,[29] and enhanced self-esteem.[4, 29]

Control—Eight studies examined experiences related to control regarding decision-making and processes of PNC. Women reported greater satisfaction with PNC when their views were taken into account (N=333).[50] RCT subjects (N=935) were more likely to rate care highly if they had an active say in decisions.[44] Three studies reported that women did not feel they had enough control or choice over PNC processes[4, 38, 55] and wanted more cooperative,[39] less authoritarian[4] care and providers who listened to their perspectives.[4, 55] Some women wanted assistance in assuming a more active role, including receiving help in making decisions, proactive offers of choices and having partners involved in discussions.[25] Subjects in one study reported that when providers expressed concern about psychosocial issues, their involvement in decision-making increased.[53] For some women, control simply meant having the confidence to ask questions.[25]

Theme 5: Relationships with Staff and Clinicians

Relationships with Staff and Clinicians is comprised of five sub-features: *Language, Respect, Individualizing Care, Caring and Putting at Ease, and Communicating Information.* The topic of relationships was discussed in 22 of the 36 studies reviewed, and had the largest number of coded findings, suggesting its importance to women's experience of PNC.

Language—Four studies reported that women had problems understanding staff and clinicians who did not speak their primary language.[35, 45] Hispanic women had a greater likelihood of facing these problems than non-Hispanic women;[45] interpreters were not always available during PNC[45] and even when available, women sometimes relied on children for translation.[32] In addition, English-speaking women in both the U.S. and England reported difficulties understanding non-native English-speaking providers.[26, 35] Studies from four countries reported that women disliked medical terminology or requested that providers use common English.[4, 25, 35, 40]

Respect—Eight articles elicited women's perceptions regarding respectful treatment while receiving care. When PNC was respectful, women were more pleased with, or participated more actively in, care.[4, 24, 32, 45] However, sometimes staff were seen as rude and abrupt,[4] and physicians and nurses as disrespectful.[45] One woman described feeling like a “fly on the wall.”[4]

Several studies reported discrimination or stereotyping related to race, ethnicity, income, or substance abuse. The likelihood of feeling that one had been treated respectfully by professionals and staff was lower for Hispanic than non-Hispanic women.[45] African-American women in one study felt they were treated differently due to race or lack of insurance.[35] In another study, African-American women observed that they were assumed to be Medicaid recipients, and that Medicaid recipients received less attention than other women.[28] Low income women in two studies reported feeling stereotyped as single, welfare mothers,[4] and homeless, substance-abusing women reported being treated “like crap” or “a piece of meat.”[34] Such treatment sometimes deterred attendance.[3, 4, 34, 45]

Individualizing Care—Women valued when care was individualized in ways that addressed their own needs.[24, 38, 39] They appreciated when professionals listened to them,[4] tailored care to their needs[4, 50] and addressed their own particular emotional and social concerns.[26] Women who felt their concerns had been taken seriously were more likely to rate care highly.[46]

However, in five studies women reported that PNC was impersonal. The process was described as “mechanistic,” like an “assembly line,” with every visit “pretty much the same.”[39] Women felt they were treated as “number”[47] or a “file”[40] and disliked when clinicians focused on tasks rather than on their emotional needs[40] or on them as individuals.[4] Women expressed disappointment when their concerns were viewed as routine or when low risk pregnancies were not accorded the attention devoted to high risk pregnancies.[39, 47] Impersonal care led some women to wish for prenatal visits to be “over as quickly as possible,” and deterred return visits.[45]

Caring and Putting at Ease—Women wanted professionals to care about them and to put them at ease. This included a desire for empathy,[35] genuine concern,[4] emotional support,[40] and a sense that providers knew them[47] and provided advice they could trust.

In several studies, women indicated that their providers put them at ease,[4] cared about them,[34, 39] or that staff was kind and understanding.[26] When practitioners used humor[4] or shared experiential knowledge,[35] this made women comfortable. Women also valued becoming close to[49]—or "friends" with[55]—their midwives. In three surveys (combined N=1,683), women reported higher satisfaction with PNC when women were also satisfied with processes of communication with clinicians[42, 53] or when they were satisfied with advice received.[33] Lay health workers showed caring and alleviated stress by helping with non-medical problems, sharing experiences, and spending time with women.[35]

However, eight studies reported more negative interpersonal experiences. Women sometimes felt providers were unfriendly [3, 45] and interested only in their medical health,[4, 40] or that staff members were harsh.[45] Their comments were vivid: they "shrugged me off"[4] and "it feels like I make their lives miserable."[45] Women were intimidated by nurses' workloads,[40] "inhibited" by staff,[26] and feared staff would find out about their substance abuse.[3] Professionals were sometimes perceived as insensitive to the complex, challenging circumstances of women's lives.[4, 35, 45]

Communicating Information—Eleven studies reported reactions to how professionals communicated information. Women appreciated when clinicians offered information,[25] explained procedures,[39, 42, 46,30] asked and answered questions,[4, 30] and enabled them to ask questions.[47] Credibility was enhanced when professionals shared experiential knowledge.[4] Frustrations included feeling that professionals had not listened to them,[35] had treated their questions as unimportant,[40] or had provided inadequate explanations and answers.[26, 38, 39, 45] One study noted that women felt the "onus was on them to ask the 'right' questions," creating anxiety.[38]

Theme 6: Receipt of Information

Eighteen studies reported findings regarding informational content. Women sought comprehensive, relevant information during PNC that would dispel myths, help them make choices, or reassure them.[4, 25, 39] They wanted information on specific topics, including: 1) what to expect in pregnancy,[24, 40] 2) self-care,[4] 3) high-risk pregnancy,[31] 4) labor and birth,[4, 24, 25] 5) infant care,[5, 25, 31, 52] 6) family planning,[52] 7) dealing with stress and conflict,[52] and 8) partner's role.[25]

In three studies (combined N=1,741), satisfaction with PNC was related to the amount, range and adequacy of information received.[33, 53, 56] Women liked receiving information about common pregnancy issues,[3, 56] and being in groups enhanced their learning.[29] However, five studies reported that information was insufficient[26, 35, 56] or did not meet women's needs as they defined them.[4, 52, 56] When information was inadequate, women felt frustrated and less trusting.[35] Women also sought health information and advice outside of PNC from family or friends; [5, 31, 40]sometimes this happened when they were unable to obtain information from clinicians.[5]

DISCUSSION

The findings of this review collectively suggest that women's experiences of PNC were mixed. Several articles indicated that some women received psychosocial services, group support, and coordinated care. However, continuity and adequate information were not always present, and many studies reported long waits and/or rushed visits. The prevalence of findings about relationships with staff and clinicians suggests this feature of care is critical. Many studies reported that women felt they were treated respectfully, care was individualized, and they had caring providers they trusted. Unfortunately, care was sometimes perceived as mechanistic, routine, or harsh, with clinicians focusing on medical needs to the exclusion of providing advice or emotional support. Thus, while the studies reviewed indicate that for some women PNC was a positive experience, for some women PNC was disappointing. The vivid language employed in some in-depth comments suggests that at times PNC even can be experienced as quite unpleasant or dehumanizing.

Women had preferences regarding PNC. These included flexible care that welcomed and accommodated significant others, reasonable waits, and unhurried visits. Many studies reported that women preferred a single provider or at least better coordination of care with multiple providers. Some women also sought comprehensive care and peer groups. Finally, some women wished for less formal, more intimate relationships with professionals who demonstrated genuine concern for their circumstances and helped them become active participants in care.

Low Income and Minority Women's Experience of Care

Many study participants had low incomes or were from racial or ethnic minority groups. While many studies indicate positive experiences, studies also suggest that PNC can be particularly frustrating for women from these populations. Low income and minority women were heavily represented in studies reporting harsh, rude or impersonal treatment, long wait times for short visits, and inadequate information. Experiences included discrimination or stereotyping related to race, ethnicity, income, or lack of health insurance. Language barriers and medical jargon may have particularly impeded communication for immigrants and women with lower literacy levels.

The possibility that women from these vulnerable populations may have especially unpleasant experiences within PNC merits further consideration – particularly when viewed against the backdrop of external obstacles that women may face when obtaining health care. African-American and Hispanic-American pregnant women are more likely than Whites to be poor, teenaged and single.[57] They often have limited support,[58] and high levels of negative life events[57, 58] and depression.[57] Low income women may move often, live in dangerous neighborhoods[57] and have difficulty obtaining transportation and child care. Furthermore, while Medicaid covers PNC, 37% of Americans below the poverty level, including many immigrants, are ineligible for Medicaid and are uninsured.[59] Lack of insurance may contribute to late initiation of PNC, with unaddressed health needs that may increase pregnancy risk.[15, 60] Indeed, such challenging life circumstances were reported in some reviewed studies to deter PNC attendance and follow-up with recommendations.[3]

But internal barriers such as long waits,[40] the perception of poor treatment,[34, 45] or fear of examinations or procedures[3, 27] also deterred attendance. Sword[4] proposed that – given both the external hurdles to accessing care and the poor experiences women have once they are receiving care – some women may perform something similar to a cost-benefit analysis. As a result, women may decide that the benefits of receiving PNC do not outweigh the expenditure of time and resources required to obtain care. Thus, these women, who may sometimes be viewed within the health care system as non-compliant, or passive non-users of care, may in fact be making rational choices. However, if PNC were modified to reduce external deterrents to receiving care and make processes of care more attractive to women,[3] then low income and minority women's experience of PNC, attendance, and pregnancy outcomes all might improve.

Lack of Recognition of Women's Frustrations with Prenatal Care

The studies included in this review provide compelling evidence that women often are disappointed or frustrated with PNC. For some readers, particularly clinicians who may well understand women's challenges and frustrations, these findings may not seem surprising. Yet, it bears repeating that to-date there have been no reviews of this literature as a whole, and the relevant literature consisted of only 36 articles published over 11 years in 6 countries. Thus, while this problem may seem familiar, it has in fact remained relatively unexplored.

Why, then is this problem not more widely recognized? Possible explanations include limitations of “satisfaction” as a measure, adaptive preferences, and the focus on neonatal outcomes.

Many studies have examined women's experience of PNC by measuring “satisfaction,”[26, 30, 33, 37, 42, 43, 46, 47, 50, 51, 53, 61-64] with high reported levels.[5, 42, 48, 61, 65-67] However, this approach has notable problems. First, the concept of ‘satisfaction’ is often ill-defined[48, 68] and there is little evidence that it captures subjective experiences of health care.[25, 48, 68] Furthermore, high reported levels of satisfaction can occur even when care is judged deficient[69] or when unfavorable qualitative reports are elicited from the same participants.[66, 68] Deference, or acquiescence, effects, in which participants provide answers that they believe researchers seek, may in part explain some high satisfaction ratings.[70] These sources of bias may be particularly prevalent in research conducted on minority populations.[70, 71]

Additional problems pertain to measuring satisfaction with PNC. Pregnant women are primarily healthy and receive specialized care for a limited time. Yet few instruments account for these unique features.[37, 65, 67, 69, 72] In addition, agreement is lacking regarding appropriate timing for measuring satisfaction during pregnancy,[37, 48, 67, 69, 72] and postpartum assessments may encounter recall bias or confounding related to the birth experience.[46, 63] Given these limitations, high reported levels of satisfaction should not be construed as contradicting the mixed picture presented here of women's experience of PNC.

The widespread acceptance of traditional PNC may also be deceptive—it may be a function of limited exposure to alternatives. When deprived of options, people may develop “adaptive preferences,”[73] making it difficult to envision or articulate a desire for change. This may occur in PNC,[48, 66] particularly among low income women or minorities who may have limited choices.[71] This phenomenon is illustrated by the finding that women who had experienced continuity rated the importance of this feature more highly than women who had not.[48, 50]

Finally, with the emphasis on improving outcomes and increasing PNC utilization, certain biomedical procedures increasingly have been portrayed in recent decades as indispensable for insuring healthy babies.[74] Many women may therefore believe that they should subordinate their personal preferences regarding care in order to do what they believe will insure a healthy baby. Thus, a cluster of factors might contribute to women's silence and lack of public awareness regarding the negative aspects of women's experiences of PNC.

Limitations

Because the literature on women's experience of PNC is limited in size, and this review was intended to be a comprehensive overview, studies were included even if they were published over five years ago. Furthermore, as noted earlier, methodologic rigor was not an inclusion criterion. This approach is consistent with the objectives of a systematic review, which include identifying and synthesizing findings from a heterogeneous body of literature.[19] As a consequence, this review included several studies that failed to report questionnaire development or psychometrics, and some studies that did not adequately describe qualitative analysis procedures. Finally, the studies reviewed did not necessarily examine women's “experience” as defined here. Indeed, the reported results did not always distinguish between actual experiences and what women desired but had not experienced.

The process of reviewing the studies also had limitations. *Features of Care* were not mutually exclusive categories, and many findings could have been classified differently. It was sometimes difficult to isolate the impact of individual features of care, because some studies evaluated the effect of multiple simultaneously implemented innovations. In addition, because studies with differing objectives, methodologies and populations were included, it was not always possible to synthesize data to discern trends. Cross-national variation in health care financing and delivery might also account for variation in findings. However, given the heterogeneity of such systems within the U.S. there may be as much variation among experiences of women in U.S. studies as there is between women in U.S. and foreign studies. Finally, characteristics of professionals were not included in this review. Including these data, however, would have shifted the focus away from women's experiences of overall processes of care.

Accordingly, conclusions must be drawn with caution. Nevertheless, the review synthesized diverse studies to yield a number of recurring themes that appear to illuminate women's experience of prenatal care.

IMPLICATIONS OF FINDINGS

The most critical finding of this review is that—despite decades of recommendations for women-centered approaches to PNC—there is limited evidence regarding women's overall experience. Therefore, the primary implications relate to the need for additional research on a topic that, paradoxically, may be viewed as well-understood.

First, a broad understanding of women's overall experiences of and preferences regarding PNC is needed. Exploratory studies should examine various aspects of PNC across a range of settings and populations. Detailed, complex understandings of issues that are important to women can be discovered by conducting focus groups, interviews, and participant-observation, with systematic qualitative analysis. Surveys can also be conducted to detect wider trends and patterns, but with an awareness of the profound limitations of measuring satisfaction. Any instruments used to measure women's experience should be rigorously developed and tested, and should be capable of accounting for the unique characteristics of PNC.

On the basis of exploratory studies, specific areas for further investigation can be identified. Gaps in the literature reviewed here indicate that certain topics particularly warrant further investigation, including 1) control and participation, 2) individualizing care, and 3) improving interpersonal communication with PNC staff and clinicians.

Large scale, multi-site studies are also needed to compare women's experiences of different models of PNC, including innovative approaches. This research should be conducted under both experimental and natural conditions, and should seek to discover specific elements that matter to women, so that modifications made in clinical practice can be evidence-based.

While clinical implications must be drawn with caution from the articles reviewed, some suggestions can be gleaned. First, and quite simply, clinicians should ask women directly about their own needs and preferences, and modify care accordingly. The literature reviewed strongly suggests the critical importance of providing opportunities to ask questions and receive explanations tailored to specific concerns during visits. The importance of spending enough time with women is clear. Clinicians might also reflect on and modify their professional roles; women appreciate when clinicians view health comprehensively, share experiential knowledge, and allow less formal and more personal relationships. Incorporating these changes may, in turn, enable women to make informed choices and participate more actively in care.

Clinicians who seek to improve women's experience need to advocate in their settings for reducing external and internal barriers to PNC. This includes developing appointment templates that allow for adequate visit time and short waits; increasing continuity to foster meaningful relationships; creating a welcoming, informal, culturally-sensitive environment with toys and play spaces; offering educational opportunities during wait times; and providing coordinated ancillary services and the opportunity to meet in groups.

While incremental change ideally should yield improvements in women's experiences, in some settings, it may be more effective to implement a comprehensively redesigned model of PNC. As noted earlier, group PNC significantly improved satisfaction with care compared with routine care,[54] and offers many features women want: shorter waits, increased clinician contact time, active decision-making and participation in care, extensive education, and peer group support.[14] Furthermore, group participants also had greater PNC utilization, decreased likelihood of preterm birth, greater prenatal knowledge, and higher rates of breastfeeding initiation. These findings suggest that a comprehensive approach can affect both experience and outcomes.[54, 75]

Finally, even if additional research identifies approaches that successfully meet women's needs, two critical challenges to implementing change still remain: lack of public awareness regarding the value of improving women's experience of care, and limited resources in many settings for modifying health care delivery systems. Therefore, clinicians and researchers need to engage in policy arenas both to raise consciousness about the importance of women-centered care and to generate support and financing. So doing may improve both women's experiences of care and pregnancy outcomes, which may be inextricably linked.

Acknowledgments

The author gratefully acknowledges Lois S. Sadler, PhD, APRN-BC PNP, Sally S. Cohen, PhD, RN, FAAN; Kathleen Knafl, PhD, FAAN, Holly Powell Kennedy, PhD, CNM, FACNM, FAAN and Nora Groce, PhD for their guidance in developing and revising this manuscript.

The author would also like to acknowledge support from the March of Dimes Graduate Nursing Scholarship, and NIH/NINR grants T32NR008346 and F31NR009911.

REFERENCES

1. Alexander GR, Kotelchuck M. Assessing the role and effectiveness of prenatal care: History, challenges, and directions for future research. Public Health Rep 2001;116:306–16. [PubMed: 12037259]
2. Cunningham, FG.; Leveno, KJ.; Bloom, SL.; Hauth, JC.; Gilstrap, LC.; Wenstrom, KD. Williams obstetrics. Vol. 22nd ed.. MrGraw-Hill; New York, NY: 2005.
3. Mikhail BI. Perceived impediments to prenatal care among low-income women. West J Nurs Res 1999;21(3):335–50. [PubMed: 11512202]
4. Sword W. Prenatal care use among women of low income: A matter of “taking care of self”. Qual Health Res 2003;13(3):319–32. [PubMed: 12669334]
5. Bucher L, Williams S, Hayes E, Morin K, Sylvia B. First-time mothers’ perceptions of prenatal care services. Appl Nurs Res May;1997 10(2):64–71. [PubMed: 9197045]
6. Fiscella K. Does prenatal care improve birth outcomes? A critical review. Obstet Gynecol 1995;85(3): 468–79. [PubMed: 7862395]
7. MacDornan, MF.; Mathews, TJ. Recent trends in infant mortality in the U.S. NCHS Data Brief No 9. National Center for Health Statistics; Hyattsville, MD: 2008.
8. Martin, JA.; Hamilton, BE.; Ventura, SJ.; Menaker, F.; Kirmeyer, S.; Munson, ML. Births: Final data for 2005.. National Vital Statistics Report 2007. [May 15, 2007]. Available from: http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_06.pdf
9. Centers for Disease Control and Prevention. Healthy people 2010. U.S. Department of Health and Human Services; Washington, DC: 2005. Maternal, infant and child health..
10. U.S. Public Health Service. Caring for our future: The content of prenatal care. U.S. Department of Health and Human Services; Washington, D.C.: 1989. p. 102

11. Rooks, JP. Midwifery and childbirth in America. Temple; Philadelphia, PA: 1997.
12. Carroli G, Rooney C, Villar J. How effective is antenatal care in preventing maternal mortality and serious morbidity? An overview of the evidence. Paediatric Perinatal Epidemiology 2001;15(Suppl 1):1–42.
13. Institute of Medicine of the National Academies. Preterm birth: Causes, consequences, and prevention. National Academies Press; Washington, D.C.: 2006.
14. Novick G. CenteringPregnancy and the current state of prenatal care. Journal of Midwifery & Women's Health 2004;49(5):405–11.
15. Gennaro S. Overview of current state of research on pregnancy outcomes in minority populations. Am J Obstet Gynecol May;2005 192(5 Suppl):S3–S10. [PubMed: 15891709]
16. Rising S. Centering Pregnancy: An interdisciplinary model of empowerment. J Nurse Midwifery 1998;43:46–54. [PubMed: 9489291]
17. Gagnon, AJ. Individual or group antenatal education for childbirth/parenthood The Cochrane Database of Systematic Reviews 2000 2000. p. 1-24.(4. Art. No>:CD002869. DOI: 10:1002/14651858. CD002869)
18. Merriam-Webster Online Dictionary. Experience. 2008 [May 16, 2008]. Available from: http://www.merriam-webster.com/dictionary/experience
19. Sandelowski M, Voils CI, Barroso J. Comparability work and the management of difference in research synthesis studies. Soc Sci Med 2007;64:236–47. [PubMed: 17029691]
20. Bernstein, R.; Edwards, T. An older and more diverse nation by midcentury.. US Census Bureau News [News Release] 2008 August 14. 2008 [December 15, 2008]. Available from: http://www.census.gov/Press-Release/www/releases/archives/population/012496.html
21. Garrard, J. Health sciences literature review made easy: The Matrix Method Sudbury. Bartlett and Jones Publishers; MA: 2004.
22. Miles, MB.; Huberman, AM. Qualitative data analysis: An expanded sourcebook. Vol. Second ed.. Sage Publications; Thousand Oaks, CA: 1994.
23. Whittemore R, Knafl KA. The integrative review: Updated methodology. J Adv Nurs 2005;52(5): 546. [PubMed: 16268861]
24. Handler A, Raube K, Kelley MA, Giachello A. Women's satisfaction with prenatal care settings: A focus group study. Birth Mar;1996 23(1):31–7. [PubMed: 8703255]
25. Proctor S. What determines quality in maternity care? Comparing the perceptions of childbearing women and midwives. Birth 1998;25(2):85–93. [PubMed: 9668742]
26. Williamson S, Thomson AM. Women's satisfaction with antenatal care in a changing maternity service. Midwifery 1996;12(4):198–204. [PubMed: 9069913]
27. Fuller CA, Gallagher R. Perceived benefits and barriers of prenatal care in low income women. J Am Acad Nurse Pract 1999;11(12):527–32. [PubMed: 11000766]
28. Wilkinson DS, Gonzalez-Calvo J. Clients' perceptions of the value of prenatal psychosocial services. Soc Work Health Care 1999;29(4):1–12.
29. Grady MA, Bloom KC. Pregnancy outcomes of adolescents enrolled in a CenteringPregnancy program. Journal of Midwifery & Women's Health 2004;49(5):412–20.
30. Handler A, Rosenberg D, Raube K, Lyons S. Prenatal care characteristics and African-American women's satisfaction with care in a managed care organization. Women's Health Issues May-Jun; 2003 13:93–103. [PubMed: 12867088]
31. Hayes ER, Morin KH, Sylvia B, Bucher L. Prenatal care and birthweight: A pilot study of mothers' perceptions of accessibility, availability, and satisfaction with prenatal care services. Journal of Perinatal Education 1997;6(4):39–47.
32. Bender DE, Harbour C, Thorp J, Morris P. Tell me what you mean by "si": Perceptions of quality of prenatal care among immigrant Latina women. Qual Health Res Nov;2001 11(6):780–94. [PubMed: 11710077]
33. Oropesa RS, Landale NS, Kenkre TS. Structure, process, and satisfaction with obstetricians: An analysis of mainland Puerto Ricans. Med Care Res Rev Dec;2002 59(4):412–39. [PubMed: 12508703]

34. Milligan R, Wingrove BK, Richards L, Rodan M, Monroe-Lord L, Jackson V, et al. Perceptions about prenatal care: Views of urban vulnerable groups. BMC Public Health. 2002
35. Sheppard VB, Zambrana RE, O'Malley AS. Providing health care to low-income women: A matter of trust. Fam Pract 2004;21(5):484–91. [PubMed: 15367469]
36. Klerman LV, Ramey SL, Goldenberg RL, Marbury S, Hou J, Cliver SP. A randomized trial of augmented prenatal care for multiple-risk, Medicaid-eligible African-American women. Am J Public Health 2001;91(1):105–11. [PubMed: 11189800]
37. Lowry LW, Saeger J, Barnett S. Client satisfaction with prenatal care and pregnancy outcomes. Outcomes Manag Nurs Pract 1997;1(1):29–35. [PubMed: 9432440]
38. Proctor S. Women's reactions to their experience of maternity care. British Journal of Midwifery 1999;7(8):492–8.
39. Blackwell DA. Prenatal care services in the public and private arena. J Am Acad Nurse Pract Dec; 2002 14(12):562–7. [PubMed: 12567924]
40. Worley BL, Bullock LFC, Geden E. The incubator model: Is it effective prenatal care? Clinical Excellence for Nurse Practitioners 2004;8(1):29–34.
41. Davey M, Brown S, Bruinsma F. What is it about antenatal continuity of caregiver that matters to women? Birth Dec;2005 32(4):252–61. [PubMed: 16336366]
42. Handler A, Rosenberg D, Raube K, Kelley MA. Health care characteristics associated with women's satisfaction with prenatal care. Med Care May;1998 36(5):679–94. [PubMed: 9596059]
43. Dye TD, Wojtowycz MA. Organisational variation, satisfaction, and women's time investment in prenatal care. Paediatr Perinat Epidemiol Apr;1999 13:158–69. [PubMed: 10214607]
44. Waldenstrom U, Brown S, McLachlan H, Forster D, Brennecke S. Does team midwife care increase satisfaction with antenatal, intrapartum, and postpartum care? A randomized controlled trial. Birth 2000;27(3):156–67. [PubMed: 11251496]
45. Tandon SD, Parillo KM, Keefer M. Hispanic women's perceptions of patient-centeredness during prenatal care: A mixed-method study. Birth Dec;2005 32(4):312–7. [PubMed: 16336373]
46. Biro MA, Waldenstrom U, Brown S, Pannifex JH. Satisfaction with team midwifery care for low- and high-risk women: A randomized controlled trial. Birth 2003;30(1):1–10. [PubMed: 12581034]
47. De Koninck M, Blais R, Joubert P, Gagnon C, L'Equipe d'evaluation des projets-pilotes s-f. Comparing women's assessment of midwifery and medical care in Quebec, Canada. Journal of Midwifery & Women's Health 2001;46(2):60–7.
48. van Teijlingen ER, Hundley V, Rennie A, Graham W, Fitzmaurice A. Maternity satisfaction studies and their limitations: “What is, must still be best”. Birth 2003;30(2):75–82. [PubMed: 12752163]
49. Shields N, Turnbull D, Reid M, Holmes A, McGinley M, Smith LN. Satisfaction with midwife-managed care in different time periods: A randomised controlled trial of 1299 women. Midwifery 1998;14(2):85–93. [PubMed: 10382476]
50. Spurgeon P, Hicks C, Barwell F. Antenatal, delivery and postnatal comparisons of maternal satisfaction with two pilot Changing Childbirth schemes compared with a traditional model of care. Midwifery Jun;2001 17(2):123–32. [PubMed: 11399133]
51. Hicks C, Spurgeon P, Barwell F. Changing Childbirth: A pilot project. J Adv Nurs 2003;42(6):617–28. [PubMed: 12787235]
52. Vonderheid SC, Montgomery KS, Norr KF. Ethnicity and prenatal health promotion content. West J Nurs Res Jun;2003 25(4):388–404. [PubMed: 12790055]
53. Korenbrot CC, Wong ST, Stewart AL. Health promotion and psychosocial services and women's assessments of interpersonal and prenatal care in Medicaid managed care. Maternal & Child Health Journal 2005;9(2):135–49. [PubMed: 15965619]
54. Ickovics JR, Kershaw TS, Westdahl C, Magriples U, Massey Z, Reynolds H, et al. Group prenatal care and perinatal outcomes. Obstet Gynecol 2007;110(No 2 Part 1):330–9. [PubMed: 17666608]
55. Walsh D. An ethnographic study of women's experience of partnership caseload midwifery practice: The professional as a friend. Midwifery Sep;1999 15:165–76. [PubMed: 10776241]
56. Freda MC, Andersen HF, Damus K, Merkatz IR. Are there differences in information given to private and public prenatal patients? Am J Obstet Gynecol 1993;169(1):155–60. [PubMed: 8333444]

57. Dole N, Savitz DA, Siega-Riz AM, Hertz-Picciotto I, McMahon MJ, Buekens P. Psychosocial factors and preterm birth among African American and White women in central North Carolina. Am J Public Health Aug;2004 94(8):1358–65. [PubMed: 15284044]
58. Zayas LH, Cunningham M, McKee MD, Jankowski KR. Depression and negative life events among pregnant African-American and Hispanic women. Women's Health Issues Jan-Feb;2002 12(1):16–22. [PubMed: 11786288]
59. Kaiser Commission on Medicaid and the Uninsured. The uninsured: A primer 2007. [May 21, 2008]. Available from: http://www.kff.org/uninsured/upload/7451-03.pdf
60. Handler A, Rosenberg D, Rankin KM, Zimbeck M, Adams EK. The pre-pregnancy insurance status of public aid recipients in the aftermath of welfare reform: Women in the Medicaid gap. J Health Care Poor Underserved Feb;2006 17(1):162–79. [PubMed: 16520525]
61. Handler A, Rosenberg D, Raube K, Lyons S. Satisfaction and use of prenatal care: their relationship among African-American women in a large managed care organization. Birth Mar;2003 30(1):23–30. [PubMed: 12581036]
62. Johnson M, Langdon R, Yong L, Stewart H, Kelly P. Comprehensive measurement of maternal satisfaction: The modified Mason Survey. Int J Nurs Pract 2002;8(3):127–36. [PubMed: 12000631]
63. Tough SC, Newburn-Cook CV, Faber AJ, White DE, Fraser-Lee NJ, Frick C. The relationship between self-reported emotional health, demographics, and perceived satisfaction with prenatal care. Int J Health Care Qual Assur Inc Leadersh Health Serv 2004;17(1):26–38. [PubMed: 15046471]
64. Tucker JS, Hall MH, Howie PW, Reid ME, Barbour RS, Florey CD, et al. Should obstetricians see women with normal pregnancies? A multicentre randomised controlled trial of routine antenatal care by general practitioners and midwives compared with shared care led by obstetricians. Br Med J Mar 2;1996 312(7030):554–9. [PubMed: 8595287]
65. Wong ST, Korenbrot CC, Stewart AL. Consumer assessment of the quality of interpersonal processes of prenatal care among ethnically diverse low-income women: Development of a new measure. Women's Health Issues 2004;14:118–29. [PubMed: 15324871]
66. Porter M, Macintyre S. What is, must be best: A research note on conservative or deferential responses to antenatal care provision. Soc Sci Med 1984;19(11):1197–200. [PubMed: 6523161]
67. Raube K, Handler A, Rosenberg D. Measuring satisfaction among low-income women: A prenatal care questionnaire. Maternal & Child Health Journal Mar;1998 2(1):25–33. [PubMed: 10728256]
68. Williams B. Patient satisfaction: A valid concept? Soc Sci Med 1994;38(4):509–16. [PubMed: 8184314]
69. Omar MA, Schiffman RF, Bingham CR. Development and testing of the patient expectations and satisfaction with prenatal care instrument. Res Nurs Health Jun;2001 24(3):218–29. [PubMed: 11526620]
70. Bernard, H. Research methods in anthropology: Qualitative and quantitative approaches. Vol. 3rd ed.. Altamira; Lanham, MD: 2002.
71. Kaplan SA, Calman NS, Golub M, Davis JH, Ruddock C, Billings J. Racial and ethnic disparities in health: A view from the South Bronx. J Health Care Poor Underserved Feb;2006 17(1):116–27. [PubMed: 16520520]
72. Littlefield VM, Adams BN. Patient participation in alternative perinatal care: Impact on satisfaction and health locus of control. Res Nurs Health 1987;10(3):139–48. [PubMed: 3647535]
73. Nussbaum, MC. Cultivating humanity. Harvard University Press; Cambridge, MA: 1997.
74. Strong, TH. Expecting trouble: What expectant parents should know about prenatal care in America. New York University Press; New York, NY: 2000.
75. Ickovics JR, Kershaw TS, Westdahl C, Rising SS, Klima C, Reynolds H. Group prenatal care and preterm birth weight: Results from a matched cohort study at public clinics. Obstet Gynecol 2003;102:1061–7.

Table 1

Thematic Findings

Themes	**Number of Articles**
1. Incentives/barriers	16
2. Prenatal care setting	9
3. Time spent	22
4. Components of care	27
a. Continuity	12
b. Comprehensiveness	18
c. Control	8
5. Relationships with staff and clinicians	22
a. Language	7
b. Respect	8
c. Individualizing care	10
d. Caring and putting at ease	14
e. Communicating Information	11
6. Receipt of information	18

Table 2

Research Studies Reporting Findings on Women's Experiences of Prenatal Care

Year	Authors	Loc[*]	Purpose[†]	Methods[‡]	N	Sample Demographics[§]	Findings[//]
1993	Freda et al.	US	Compare satisfaction with info in public vs. private clinics	Comparative; Qs	159	Clinic patients: 71% Latina,16% AA; Private patients: 57% White, 13% AA	IN
1996	Handler et al.	US	Identify PNC attributes that affect satisfaction among at-risk women	Descriptive; focus group and Qs	50	Low income Latina, AA and White	I/B,S,T,C,IN
1996	Williamson and Thomson	En	Describe women's views of PNC; identify important aspects of PNC	Descriptive; Qs, closed and open-ended	261	Low income	I/B,T,R,IN
1997	Bucher et al.	US	Compare needs, availability, accessibility, use PNC services in LBW and normal BW mothers	Descriptive, comparative; Qs	426	78.7% White, 17.7% AA	I/B,T,IN
1997	Hayes et al.	US	Determine satisfaction with and accessibility of PNC; compare access, use of PNC services among LBW and normal BW mothers	Descriptive, comparative; Qs, closed and open-ended	40	90% Caucasian, 10% AA	I/B, C, IN
1997	Lowry et al.	US	Compare satisfaction with nursing care, clinic care, and outcomes in two clinics	Descriptive, comparative; Qs	104	1/3 White, 2/3 Nonwhite. Primarily low income.	S,T,C
1998	Handler et al.	US	Explore relation between characteristics of PNC and satisfaction with PNC	Descriptive; Qs	101	75% AA and 25% MA	T,C,R
1998	Proctor	Eng	Identify perceptions of PNC quality	Descriptive, qualitative; focus group	38	Not described	I/B,S,T,C,R IN
1998	Shields et al.	Sc	Compare satisfaction between two PNC models	RCT	1299	58% low income	C,R
1999	Dye and Wojtowycz	US	Examine satisfaction with PNC in relation to time investment in obtaining PNC	Descriptive; Qs	364	Low income	T
1999	Fuller and Gallagher	US	Identify barriers to/benefits of PNC and beliefs that influence women to seek PNC	Descriptive, cross-sectional; Qs	100	Low income; 87% white	I/B
1999	Mikhail	US	Describe experience of PNC; determine and compare impediments based on adequacy	Descriptive; Qs, closed and open-ended	126	Low income, AA	I/B,T,R,IN
1999	Proctor	En	Identify aspects of PNC care that matter and responses to those aspects	Descriptive, qualitative; open-ended comments	223	Not described	S,T,C,R
1999	Walsh	En	Explore the experience of continuity of care within a partnership caseload model	Descriptive, exploratory, ethnographic; interviews	10	Not described	C,R

Year	Authors	Loc[*]	Purpose[†]	Methods[‡]	N	Sample Demographics[§]	Findings[∥]
1999	Wilkinson and González-Calvo	US	Better understand how women perceive psychosocial services during pregnancy	Descriptive, qualitative; focus groups	15	5 Latina, 5 AA, and 5 White; low income	I/B,S,T,C,R
2000	Spurgeon et al.	En	Compare satisfaction with traditional care with 2 new models	Descriptive, comparative; Qs	333	Not described	C,R
2000	Waldenström et al.	Au	Evaluate effect of a team approach compared with standard care on satisfaction	RCT	1000	Women of lower socioeconomic status	T,C
2001	Bender et al.	US	Assess perceptions of quality and personal values that influence care-seeking behavior	Qs; photo-narrative interviews	97	Latina women in two prenatal clinics	I/B,T,C,R
2001	Klerman et al.	US	Compare outcomes, satisfacation, knowledge and behavior of augmented PNC with routine PNC	RCT; Qs	619	Low income, AA women at risk	I/B,T,C,IN
2001	DeKoninck et al.	Ca	Compare woman-centeredness and continuity in physician and midwife care	Matched cohort; Qs; 10 open-ended interviews	1933	Not described	T,R
2002	Blackwell	US	Explore perceptions of experience of PNC in public and private arena	Exploratory, descriptive; qualitative; interviews	20	Women attending 2 clinics: 45% Hispanic, 40% White, 15% AA	S,T,C,R,IN
2002	Milligan and Wingrove	US	Report women's observations about PNC	Exploratory; qualitative; focus groups	169	Homeless women, substance abuse history, inner city	I/B, C,R
2002	Oroposa et al.	US	Document satisfaction with care; investigate link between sat, structure, process and outcomes	Descriptive, retrospective; Qs	1219	Puerto Rican mainland mothers; primarily low income	I/B,T,C,R,IN
2003	Biró et al.	Au	Assess impact of team model on women's experiences, compared with standard PNC	RCT; Qs	633	Not described	T,C,R
2003	Handler et al.	US	Examine PNC characteristics related to satisfaction in public and commercially insured women	Descriptive, comparative; Qs	400	AA, low income women	I/B,S,T,C,R
2003	Hicks et al.	En	Compare outcomes of a pilot program that provides continuity with traditional care	RCT; Qs	200	Not described	C,R
2003	Sword	Ca	Develop a grounded theory of women's experiences and behaviors	Qualitative; interviews and focus groups	26	Low income women	I/B,S,C,R,IN
2003	van Teijlingen et al.	En	Describe women's views about care	Descriptive; Qs	1137	98% white	C
2003	Vonderheid et al.	US	Compare topics desired and topics discussed; determine	Descriptive; structured interviews	159	Low income MA and AA women	C,IN

Year	Authors	Loc[*]	Purpose[†]	Methods[‡]	N	Sample Demographics[§]	Findings[‖]
			whether ethnicity related to info received				
2004	Grady and Bloom	US	Describe the implementation and evaluation of a group PNC program	Descriptive; Qs, closed and open-ended	69	Not described	I/B,C,IN
2004	Sheppard et al.	US	Explore experiences that influence trust of professionals and lay health workers	Descriptive, qualitative; focus groups	33	23 AA, 6 white, 2 Hispanic, 2 multiracial, low income women.	I/B,T,C,R,IN
2004	Worley et al.	NZ	Explore women's experience of PNC; identify psychosocial barriers to care; better understand chronic non-attenders' experiences	Qualitative, phenomenological; indepth interviews	10	Clinic patients	S,T,C,R,IN
2005	Davey et al.	Au	Examine two aspects of continuity of caregiver on overall rating of PNC	Descriptive; Qs	1616	Not described	T,C
2005	Korenbrot et al.	US	Determine whether support services use is associated with better interpersonal care and sat	Descriptive, correlational; Qs	363	AA, Latina, White low income women	C,R,IN
2005	Tandon et al.	US	Determine prevalence and likelihood of Hispanic mothers perceiving care as patient-centered.	Interviews, open and closed ended	427	29% Latina, 43%, White; 17% AA	T,R
2007	Ickovics et al.	US	Compare outcomes, satisfaction between group and individual PNC.	RCT; Qs; record review	1047	80% AA, 12% Latina, 8% White/Other	C

[*] Location in which study was conducted. Au= Australia; C= Canada; E=England; NZ=New Zealand; S= Scotland; US=United States

[†] Purposes relevant to women's experience of care are listed; there may be additional purposes or research questions. Sat=satisfaction; Info=information; PNC= prenatal care; BW=birthweight; LBW=low birthweight

[‡] Description of study methods. Qs= questionnaire; RCT=randomized controlled trial

[§] Income, race and/or ethnicity, if described. AA = African-American; MA=Mexican-American

[‖] Themes identified: I/B=Incentives/Barriers; S=Setting; T=Time Spent; C=Components of Care; R=Relationships with Staff and Clinicians; IN=Receipt of Information