

Familias Sanas: An Intervention Designed to Increase Rates of Postpartum Visits among Latinas

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Abstract: *Familias Sanas* (Healthy Families) is an educational intervention implemented and tested with low-income, immigrant Latina mothers. The program was designed to reduce existing health disadvantages of Latinas by empowering them to take active part in the management of their health and by encouraging them to advocate for themselves. *Familias Sanas* was implemented at a prenatal clinic located at a major urban hospital in the southwestern U.S. The efficacy of the intervention was evaluated through a randomized control trial measuring the participants' rate of postpartum visits and other relevant well-being measures. Initial findings show a significant effect of the intervention, with participants in the experimental group returning for their postpartum clinic visit at a higher rate in comparison with the control group. The results are discussed from a culturally specific perspective. Practice, policy, and research implications and recommendations are provided.

Key words: Interconception, Latinas, prenatal-partners.

The *interconception period*, the time between pregnancies, is a critical time to link women to interventions designed to reduce risk factors associated with their overall well-being and the well-being of their children.¹ This period is important because some health interventions for women of reproductive age (e.g., treatment for diabetes and hypertension, folic acid supplementation) must begin before conception. The postpartum visit, for many women the onset of interconception care, is an ideal time to discuss women's medical and psychosocial needs and to develop a plan for continuing care, especially for women at risk of not getting regular well-being check ups.² It also affords the opportunity to discuss with new mothers problems related to transitioning back to work, and breastfeeding.²

Although the importance of the postpartum visit is well documented, the Health Employer Data and Information Set (HEDIS) reported that only 59% of women with Medicaid insurance receive postpartum checkups, compared with 80% of women covered by private insurance.³ Latinas, as well as other minority women of low socioeconomic

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status and little education, have low rates of return for postpartum health care appointments, putting them at a disproportionate risk for negative health outcomes.⁴ When lack of insurance is not a problem, other factors may affect health-seeking behaviors. In previous studies, primiparous women were more likely to attend the postpartum visit than multiparous ones.^{4,5} Low parity has also been linked to low rates of return to a postpartum visit among low-income women around the world.⁶

Although many factors may affect women's decision to attend a postpartum visit, some researchers argue that women need to perceive a benefit from the postpartum visit to take advantage of this opportunity for care.⁵ Few promising interventions center on the postpartum and interconception period,^{7,8} and those that do tend to focus on African American women; more knowledge is needed about effective strategies for sustainable engagement of Latinas in their reproductive care. Considering the rapid growth of the Latino population in the United States the promotion of medical care that improves pregnancy-related outcomes among Latinas is likely to have a great impact on reducing ethnic health disparities and societal cost⁹ and could benefit providers because it is more cost-efficient to keep a patient who is already in a provider's system than to recruit and attract new patients.¹⁰

Perceptions of the importance of seeking medical care during and after pregnancy may also be influenced by cultural norms.¹¹ Cultural and linguistic influences, active long before a woman needs medical care, can become barriers between a female patient and her medical provider. Such barriers impede communication and trust, which may lead to poor adherence to recommendations and possibly to termination of doctor visits.¹² Coonrod and colleagues have documented the importance of attending to differences by ethnicity and culture, and the impact of acculturation and cultural values on a variety of Hispanic Medicaid-enrolled women's health issues, including use of folic acid prior to conception;¹³ obstetric outcomes;¹⁴ family planning;¹⁵ and utilization of community health nurse home visits by Hispanics and non-Hispanics.¹⁶ In these studies, White non-Hispanic women and U.S.-born Hispanic heritage women were more likely to use medical services and to bring their babies to their doctor visits than Mexican-born women.

Bridging the cultural gap. Culturally tailored programs can positively influence access to care, adherence, and outcomes.¹⁷⁻²¹ Models such as *promotoras de salud* (health promoters) have proven efficacious when implemented with Latino communities on the U.S.-Mexico border region to prevent and treat a variety of diseases and conditions.^{22,23} One of the reasons that these programs are successful is because they are tailored to the Latino community and are responsive to Latino spiritual and cultural beliefs related to health, such as the importance and influence of social support from family and friends,^{24,25} and beliefs in the power of faith over illness, and/or about the supernatural roots of illness.²⁶ Research related to ideas about the roots of illness and family support among Latinos suggests that these factors are associated to health promotion behaviors.²⁷ However, programs that are culturally grounded also take into consideration variations within groups.

The *Familias Sanas* intervention was designed to bridge the possible cultural gap between Latinas and the health care system, and to reinforce among pregnant Latinas the importance of the postpartum visit and of caring for one's health. *Familias Sanas*

utilized Prenatal Partners (PP), or *Compañeras* in Spanish, as cultural brokers who showed participants how to navigate the health system more effectively, encouraged them to advocate for themselves and their children, and helped them improve communication with providers and get answers for all their health-related questions. The intervention took place at the Women's Health Clinic in Phoenix, where the PPs met with participants, usually in the waiting room. Although the PPs in this study were recruited among social work students, *Familias Sanas* is not a traditional social work intervention. Social workers often provide counseling and/or other very specific services to clients, but in this study patients who were in need of counseling or other services were referred to various community sources. The PPs received training from the study manager in recruiting, engaging, and retaining participants, and in ways to support participants and encourage them to be active in their own health decisions. The intervention is very cost-efficient and can be replicated easily with trained lay workers.

This article reports on the effectiveness of *Familias Sanas* on rates of return of Latinas to a postpartum visit. Based on what it is known about cultural beliefs and health it was hypothesized that patients participating in the culturally grounded intervention would have greater odds of a postpartum clinic visit than patients assigned to a control group.

Methods

The intervention. The study followed a randomized control-group design. When patients came for their prenatal visits, they were invited to participate in the study if they indicated on intake that their ethnicity was Latina/Hispanic, age 18 years or older, less than 34 weeks pregnant, and having no prior prenatal visits to the clinic for the current pregnancy. Sealed envelopes containing group assignments (treatment or control) and accompanying baseline assessment instruments were kept at the clinic. If a client agreed to participate in the study, she was randomized into the treatment or control group, as determined by the envelope randomly chosen by the study staff.

Each patient in the control condition received care as usual. Participants in the treatment condition received ongoing, one-on-one educational and support services from a PP. The PPs were fully bicultural and bilingual in English and Spanish. In addition to visiting with a health care professional, the patient met with her assigned PP during each clinic visit during the pregnancy. The first meeting with the PP occurred in advance of the meeting with the health care professional. In that meeting, the PP administered the informed consent form, conducted the baseline assessment, and established rapport with the client. In the second meeting, which occurred after the patient met with the health care professional, the PP provided education on prenatal care, discussed any of the clients' concerns, helped clients improve communication with their health care provider as needed, and assisted the clients in developing a plan for regular prenatal and postpartum visits. Since clients typically presented for their first clinic visit during the fifth month of pregnancy, the intervention lasted about four months and entailed between five and 20 visits with the PP. Compliance with the postpartum visit was determined directly from the participant's medical records. Figure 1 provides a summary of the intervention design and its evaluation.

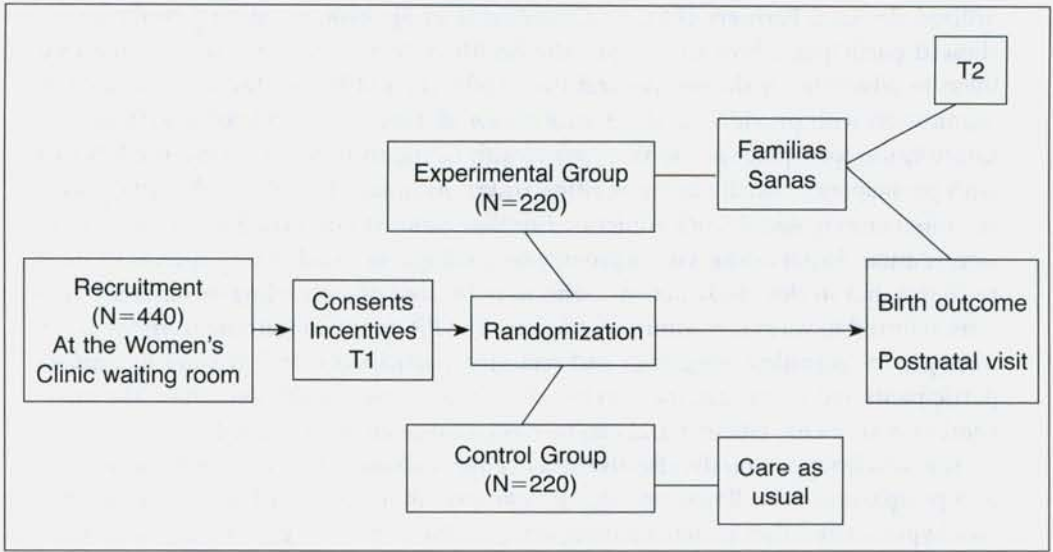


Figure 1. Graphic representation of the Familias Sanas intervention flow and evaluation (this article reports only on the outcome variable of mothers who were two months postpartum).

The PP-patient encounters were focused on the importance of caring for one's health and the need for women's wellness exams, starting with the postpartum visit. The rest of the conversation was patient-driven. The PP reviewed with the clients the messages and instructions received from the health care professional and listened to the clients' questions and concerns about their care. If clients missed a prenatal care visit, the PP contacted her by phone to express concern, to inquire what prevented the woman from making her medical appointment, to help the client brainstorm solutions to barriers to care, and to encourage her to reschedule the missed appointment. Participants in the control condition met with the PP during their first clinic visit for data collection purposes only. Other than this initial meeting with the PP, the control group participants received care as usual. All sessions with the PP lasted 20 minutes to a half hour.

The population studied comprised 440 patients of the Women's Care Clinic, Maricopa Medical Center, in Phoenix, Arizona, where data collection and the intervention occurred. The sample distribution into the two treatment arms was approximately equal (intervention: $n=221$; control: $n=219$). Descriptive statistics (Table 1) profile the patients participating in the study. Participants were mostly of Mexican heritage, first generation immigrants, on average in their late 20s; 46% were single, and most of the women were low-income and living with an average of 4.5 people in their households. The great majority of women (80%) had previous pregnancies, and about 24% had a previous spontaneous or voluntary abortion.

Assessments (measures). The outcome variable of interest was the client's compliance with the six to eight-week postpartum visit. This information was gathered from the patients' medical records at the clinic. Clients for whom no postpartum visit was recorded in the system were contacted by phone to verify that they had not had

Table 1.
DEMOGRAPHICS (N=437)

	N	Mean	Range
Mexican heritage	356 (81%)		
Other Hispanic	28 (7%)		
US born Hispanic	53 (12%)		
1st Generation	371 (84%)		
2nd	21 (5%)		
3rd	17 (4%)		
4th	9 (2%)		
Unknown	5 (1%)		
Missing	17 (4%)		
Age	437	27 (5.95)	18-45
Marital status			
Single	204 (46%)		
Married	123 (28%)		
Partner	71 (16%)		
Separated	16 (4%)		
Missing	25 (6%)		
Income (\$)			0-130,000
<20,000	323 (73%)		
21,000-50,000	68 (15%)		
>51,000	7 (2%)		
Missing	43 (10%)		
Household Size	436	4.5	1-13
Missing	4		
Primigravidas	77 (18%)		
Multigravidas	354 (80%)		
Missing	9 (2%)		
Spontaneous Abortions/Abortions			
None	289 (66%)		
1	65 (15%)		
>2	37 (9%)		
Missing	49 (11%)		

a postpartum visit in another hospital/clinic. A dichotomous variable was created: 1 = compliant, 0 = not compliant.

The following data were obtained from participating patients at the time of recruitment: two measures of acculturation. The first measure included linguistic acculturation (average of language use with family, language use with friends, and language use with media, ranging from 1 = Spanish only to 3 = Spanish and English equally to

5 = English only).²⁸ The measure consists of two subscales that reflect the respondent's degree of Hispanic or American monoculturalism. The second measure, time lived in U.S. in years (0 = 10+ years, 1 = 0-9 years), was used as a proxy for acculturation. The Social Support scale,²⁹ which ranges from 16 to 44, was used to measure social support from family, friends, and significant others. The scale has 12 items, such as "I get the emotional help and support I need from my family." A dichotomous variable was constructed (0 = low support, 1 = high support). The Health Locus of Control Scale (HLC)³⁰ measures internal locus of control, chance, and powerful others. These three variables were dichotomized. In the HLC, 0 = person is not in control of her own health, 1 = person is in control of own health; in the Chance subscale, 0 = the person believe that she is healthy not just by chance, 1 = the person believes that she is healthy by chance; in the Powerful Others subscale, 0 = the person believes that others are not controlling her health, 1 = others control her health.

Medical records were also used to obtain information about the number of previous pregnancies, and a dichotomous variable was created: 0 = primigravida, 1 = multi-gravida. Similarly, information about previous miscarriages/abortions was collected and a variable created: 0 = no previous miscarriages/abortions, 1 = one or more previous miscarriages/abortions.

The PP kept track of the client's visits at each time interval, keeping a tally of the number of visits. A dichotomous variable was used in analysis: 0 = 1 to 4 visits, 1 = 5 or more visits with the PP.

Analysis plan. Data from the baseline and postpartum assessments and the medical record were compiled into an SPSS³¹ database. They were cleaned and examined for outliers and invalid entries. Any anomalous findings were compared with the original sources and corrected. In the instances where the data include multiple indicators, such as acculturation, the various indicators were scrutinized for scalability. Scale reliability was assessed using a combination of indices: coefficient alpha, test-retest correlations, and R^2 for the scale predicting other theoretically linked scales.

Contingency tables were constructed to examine association between variables of interest. A chi-squared test of association was used to test the hypothesis that clients receiving the intervention will have greater odds of a postpartum clinic visit than clients in the control condition. Finally, logistic regression was utilized to test whether these associations persisted in multivariable analysis.

Results

Cross-tabulation between the acculturation measures and the Locus of Control, and Social Support variables were computed. Results indicate that 68% (n=94) of women who scored high in the Americanism orientation scale reported receiving higher levels of support from friends relative to less acculturated women with high scores on Hispanicism 58% (N=173) ($\chi^2=3.36$, 1 df, $p=.07$). Acculturation was not significantly related to the other measures of social support (support from family and from significant others).

About 61% (n=181) of women with a highly Hispanic orientation believed that others (not they) have control of their health compared with 41% (n=67) of women

with a high American orientation ($\chi^2=14.97$, 1df, $p=.000$). This may indicate that more acculturated individuals are less likely to believe that their health is in the hands of other people. Acculturation was not significantly related to health locus of control and health by chance. In addition, none of the social support variables or the health locus of control variables were significantly associated with attending the postpartum visit.

Since previous research has suggested differences between gravida status and attendance to a postpartum visit, further analysis was conducted to test whether the same results hold true in this sample. While contingency tables indicated no relationship between gravida status and whether women attended the postpartum visit, significant results were found when performing similar testing with women who had previous abortions (whether spontaneous or by choice). Within the intervention group, 81% ($N=36$) of women who had experienced a previous abortion attended the postpartum appointment compared with 67% ($N=91$) who had no previous abortion ($\chi^2=3.34$, 1df, $p=.07$). Equivalent comparisons among women in the control group were non-significant ($\chi^2=.379$, 1df, $p=.538$).

The effectiveness of the intervention was assessed through a chi-squared test (Table 3). Results showed that 73% of the intervention group attended the postpartum visit compared with 51% of their peers in the control group ($\chi^2=17.880$, 1df, $p=.000$). Odds of women in the intervention group of attending the postpartum visit were 2.5 times those of their control group peers.

When acculturation, support from friends, health locus of control, previous abortions, and group assignment (intervention vs. control) as predictors of compliance with a postpartum visit were entered in logistic regression analysis, it was found that significance persisted only in the group assignment variable. The intervention group is 2.5 times more likely to attend the postpartum visit even when other factors were considered.

Finally, a contingency table was constructed utilizing only data from the intervention group to test whether the number of visits with the PP was associated with attending

Table 2.

PARTICIPANTS' CONDITION BY WHETHER THEY ATTENDED A POST-NATAL APPOINTMENT (N=374)^{ab}

	Condition*		
	Control	Experimental	Total
No Post-natal visit	84 (48.6%)	55 (27.4%)	139 (37.2%)
Post-natal visit	89 (51.4%)	146 (72.6%)	235 (62.8%)
Total	173 (100%)	201 (100%)	374 (100%)

^a $\chi^2=17.880$

^bdf=1

* $p<.000$

Table 3.**LOGISTIC REGRESSION PREDICTING THE LIKELIHOOD OF WOMEN ATTENDING A POSTPARTUM VISIT (N=377)**

Predictor	B	SE	Odds ratio	Confidence Intervals	95% Confidence Intervals
Acculturation	-.181	.24	.834		.521-1.335
Friends Support	.220	.22	1.246		.801-1.938
Health Locus of Control Scale	-.217	.23	.805		.510-1.270
Abortions	.457	.29	1.580		.902-2.766
Group Assignment	.923	.22	2.516		1.629-3.884
Constant	.188	.30	1.207		
Pseudo R2 (Nagelkerke)	.07				
N	377				

a postpartum visit. Table 4 shows that 79% of women who met the PP from five to 20 times attended the postpartum visit compared with 62% of women who met once to four times with the PP ($\chi^2=6.970$, 1df, $p=.008$).

Discussion

Interconception care is one way to engage women in their own health care and the postpartum visit is an opportunity to work with women on a health care plan that they can follow for life. While reducing health disparities has been a Healthy People

Table 4.**NUMBER OF VISITS WITH THE PRENATAL PARTNERS BY WHETHER THEY ATTENDED A POST-NATAL APPOINTMENT-INTERVENTION GROUP ONLY (N=201)^{ab}**

	Prenatal Partners Visits*		
	1 to 4	5+	Total
No Post-natal visit	28 (38.4%)	27 (21.1%)	55 (27.4%)
Post-natal visit	45 (61.6%)	101 (78.9%)	146 (72.6%)
Total	73 (100%)	128 (100%)	201 (100%)

^a $\chi^2=6.970$ ^bdf=1* $p<.008$

2010 goal, the postpartum visit is identified as such a critical medical visit that Healthy People 2020 has added it as a new objective.^{32,33}

While the benefits of attending a postpartum visit are known, minorities and women with low education and low socioeconomic status are less likely to make postpartum visits. Latinas, in particular, have a low rate of return to postpartum visits and this places them at a disproportionate risk for negative health outcomes. The *Familias Sanas* intervention was designed to address this problem with the long-term goal of reducing health disadvantages among Latinas. This intervention may be replicated employing *promotoras de salud* trained to empower participants to advocate for themselves, to communicate better with their health care providers, and to find ways to solve their problems/barriers to health care. The *Familias Sanas* PPs work at a hospital or clinic, enabling them to serve a greater number of patients than *promotoras* who are involved in home visiting, thus reducing considerably the cost of the intervention.

The main hypothesis of the *Familias Sanas* study—that patients participating in the intervention would have greater odds of a postpartum clinic visit than patients assigned to a control group—was confirmed. A significant difference in the desired direction in the rate at which mothers in the experimental and control groups returned for their postpartum visit were found. This difference persisted in multivariate analysis. In separate analysis, there was also a significant association between the number of visits with the PP and attendance to the postpartum visit. Women who had more encounters with the PP were more likely to go back to the clinic for their postpartum appointments.

In previous research, women who gave birth for the first time and those with no previous abortions/miscarriages were more likely to attend the postpartum visit. Among women in this study, we found no differences associated with gravida status and, contrary to the results of previous research, women who had experienced a previous miscarriage/abortion and who were in the intervention group were more likely to attend the postpartum visit than those who never had an abortion (spontaneous or by choice).

Other interesting results included social support (a value often associated with Latino people) and health locus of control. Familial and significant other support were not associated with acculturation, but the American-oriented group of women was more likely to report receiving support from friends than the more Hispanic-oriented women. This may be explained in several ways. Perhaps this group of Latinas did not have extended-family members or many friends in the United States from whom to receive support; alternatively, these results may be indicative of the great variations within the Latino population. When health locus of control was examined, it was found that the less acculturated women in the sample were more likely to believe that other people (not they) were in charge of their health. This result confirms previous studies that emphasize traditional Latino values on the power of faith, and the belief that their health is in someone else's hands (the other often being God).

The success of the intervention is believed to reside primarily in the empowerment component. The prenatal partners did not offer counseling or advice to participants, and only helped them identify barriers to accessing health care and possible solutions to these challenges. Prenatal partners helped participants think of ways to navigate the health care system effectively, to ask question from their health care providers, to learn more about their insurance coverage, and to overcome the daily hassles that prevented

them from utilizing the health care services available to them. The most important role of the prenatal partners was supporting the participants, and encouraging them to take control of their health care decisions.

Limitations. The results reflect the experience of women attending one clinic within a large metropolitan area in the Southwest US. These patients had a very specific demographic profile and the study's findings can be only generalized to similar populations. Future replication and confirmatory studies should include multisite designs allowing for the inclusion of other Latino subgroups in addition to Mexican heritage participants, a greater geographic representation, and a greater variance in terms of SES and acculturation status. Until such studies are conducted the present results must be generalized only with caution.

Policy implications. First, educational materials to improve the health literacy of mothers who do not speak English as their first language could improve knowledge about interconception care and understanding of how important health care is for women and their children. The present study demonstrated an increase of use of the postpartum visit once mothers understood the importance of this medical visit. An effective way to provide health education to women and empower them to utilize the health care system effectively would be through the addition of PPs to women's clinic personnel. Part of our future challenge is to advocate for federal and/or state funding to be allocated to projects such as *Familias Sanas*.

Second, due to the lack of bilingual/bicultural medical personnel in many communities, having a psychosocial intervention at clinics can greatly benefit access and compliance with care. The establishment of community health centers that welcome migrant families and families in poverty would provide these families an opportunity to get the health care needed. In this context, supporting training of health care providers is essential at the same time that interventions such as *Familias Sanas* are needed.

Third, although insurance eligibility alone does not guarantee compliance, this is an important area in need of reform. Policies that create new opportunities to finance interconception care should be identified and considered a high priority. Additionally, many women are left with little or no medical coverage six to eight weeks after giving birth. Often, women are unable to make an appointment with their doctors within this crucial period of time. Depending on the type of insurance they have, some plans will not cover the postpartum visit after eight weeks of the birth of the baby. One simple change that may have an impact on women's reaching out for medical services between pregnancies would be to extend the number of months in which women are covered by insurance from six months to a year after the birth of the baby. Increasing access to health care services and/or increasing insurance coverage for preventive care will also improve the health of this population.

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