IMMIGRANT LATINO COUPLES AND POSTPARTUM CONTRACEPTION: ATTITUDES, PERCEPTIONS, AND SEXUAL DECISION-MAKING

PAREJAS LATINOS INMIGRANTES Y ANTICONCEPTIVOS POST-PARTO: ACTITUDES, PERCEPCIONES, Y TOMA DE DECISIONES SEXUALES

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RESUMEN

Trasfondo: El número de Latinos en EEUU está creciendo, y ellos tienen alto riesgo de embarazo sin intención y corto intervalo.

Propósito: Este estudio examinó actitudes y percepciones sobre anticonceptivos (APSA) de parejas Latinas inmigrantes relacionado con la toma de decisiones sexuales.

Métodos: Latinas embarazadas y sus parejas (n=40 parejas) fueron parte del estudio. Se utilizó el método mixto con la estrategia de concurrente empotrado. Se utilizó la estadística descriptiva, examen de t, correlación entre-clase, y el Modelo de Interdependencia Actor-Pareja (MIAP) para analizar datos cuantitativos. Las preguntas abiertas fueron analizadas con el método de análisis contento.

Resultados: En el análisis del nivel grupal, marcas de los APSA de los hombres fueron significativamente diferente de los de mujeres en cuatro dimensiones: parejas, efectos secundarios, molestia, y costo (p<0.002, 0.046, 0.018, y 0.02). En el análisis del MIAP, solo APSA de los hombres fueron asociados negativamente con tomas de decisiones de las mujeres (β= −0.158, p = 0.005). Casi dos tercios de las parejas estaban en desacuerdo con los métodos anticonceptivos después del parto. Siete categorías surgieron como razones para escoger los métodos anticonceptivos después del parto.

Conclusiones: Entender la influencia de APSA y toma de decisiones entre parejas ayudará a los investigadores y enfermeros a diseñar intervenciones basados en evidencia y culturalmente

diseñados para ayudar a parejas a escoger anticonceptivos post-parto. Reducir las barreras que tienen los hombres a los anticonceptivos proveyendo información correcta será el primero paso en afectar el factor en el nivel entre parejas
Palabras claves: anticonceptivo después del parto, toma de decisión, Latinos, parejas

ABSTRACT
Background: The number of Latinos in the US is increasing, and they are at higher risk for unintended pregnancies and short interpregnancy intervals.
Purpose: This study examined immigrant Latino couples' attitudes and perceptions towards contraception in relation to sexual decision-making.
Methods: Pregnant Latinas and their partners (n=40 couples) were recruited from prenatal care clinics in the southeastern US. This was amixed-method study with a concurrent embedded strategy. Descriptive statistics, paired t-tests, interclass correlation, and the Actor-Partner Interdependence Model (APIM) were used to analyze the quantitative data. Data from open ended questions were analyzed with content analysis.
Results: On the group-level analysis, men's Contraceptive Attitudes and Perception Scale scores were significantly different from women's in four key dimensions: partner (comfort in communicating with partner and partner's attitude), side effects, hassle, and cost (p<0.002, 0.046, 0.018, and 0.02). On the dyad-level analysis (between individual couples), no significant correlations were identified. In the dyad analysis using the APIM, only men's contraceptive attitudes and perceptions were negatively associated with women's sexual decision-making (β= −0.158, p = 0.005). Nearly two-thirds of the couples disagreed on postpartum contraceptive methods. Seven overlapping categories emerged as rationales for choosing specific postpartum contraceptive methods among men and women.
Conclusions: Understanding the dyad-level influence on contraceptive attitudes/perceptions, sexual decision-making helps researchers, and practitioners design evidence-based, culturally tailored interventions to assist couples in choosing the best postpartum contraceptives for their family. Decreasing men's contraceptive barriers by providing correct information may be the first step in mediating the dyad-level factor.

Key words: postpartum contraception, decision-making, Latinos, couples

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INTRODUCTION

According to the most recent U.S. Census Bureau report[33], Latinos accounted for 17.4% of the total population, contributing to over half of U.S. population growth in the last ten years. If the trend continues, almost 30% of the U.S. population is estimated to be Latinos in 2060. The percentage of unintended pregnancy among Latinos is more than twice as high as that of non-Hispanic Whites, at 82 per 1000 births for Latinos compared to 36 per 1000 births for non-Hispanic Whites[10]. Women with unintended pregnancies and their children are at a higher risk of suffering from preventable negative health consequences[1,37]. For instance, women with unintended pregnancies are more likely to delay seeking prenatal care and less likely than women with intended pregnancies to receive appropriate care for pregnancy-induced conditions such as gestational diabetes and preeclampsia[4]. Additionally, these women delay consumption of folic acid and the modification of lifestyle behaviors such as cigarette smoking and alcohol and drug use[4]. Further, unintended pregnancies are associated with short pregnancy intervals (less than 18 months between the end of one pregnancy and the beginning of the next).

In fact, Latinas have more 4th and higher order live births[4] and are more likely to have shorter inter-pregnancy intervals as compared to women of other races and ethnicities in the U.S.[2], putting women and their offspring at greater risk for poor pregnancy outcomes, including utero-placental bleeding disorders, maternal death, preterm birth, small size for gestational age, and long-term negative mental health outcomes[3,8]. Furthermore, Latinas with low acculturation were less likely to use any method of contraception than Latinas with high acculturation. Among the contraceptive users, less acculturated Latinas were more likely to use hormonal methods than long-lasting reversible contraception[29].

Appropriate use of contraceptive methods allows for individuals and couples to manage the number of children they have as well as timing and spacing of childbirth[36]. Efforts to increase contraceptive use commonly target women, often excluding spouses or partners, when, in fact, relationship status, partners' awareness, and involvement have been associated with improved contraceptive use[6,9,35]. Studies have shown effectiveness in working with couples rather than with women alone. For instance, a promising intervention study that investigated the effectiveness of a three-session safe sex intervention to increase consistent contraception use concluded that regardless of the types of interventions, targeting couples had a positive impact on contraceptive use[13,23]. However, the mechanism of intervention effect is not clear. Despite the existing evidence supporting couples' interventions, little is known about how to best direct these efforts to help couples make the best decision for their postpartum contraceptives.

The purpose of this study was to examine immigrant Latino couples'

contraceptive attitudes and perceptions. This includes understanding their plans and the level of agreement they demonstrate in terms of postpartum contraception, their plan, and how contraceptive attitudes and perceptions influence couples' sexual decision-making. Specifically, this study aimed to examine, a) contraceptive attitudes and perceptions, particularly differences and agreement (both group-level and dyad-level), b) postpartum contraceptive plans, rationale, and the level of agreement and c) the association between contraceptive attitudes and perceptions, and sexual decision-making among pregnant Latinas and their spouses/partners.

METHODS

This study examined data from a cross-sectional study exploring the association among relationship factors, factors related to contraceptives, and sexual relationship power[25]. This is a mixed method study with a concurrent embedded strategy[7], which involved a simultaneous collection of quantitative and qualitative data. For this analysis, quantitative data were supplemented by qualitative data to allow in-depth understanding of couples' knowledge, attitudes, and sexual decision-making. An embedded design was used to explore couples 'contraceptive attitudes and perceptions and sexual decision-making as illustrated in Figure 1.

Prior to the data collection, institutional review board (IRB) approval was obtained from the university and one of the clinics. The study participants were recruited from two urban prenatal care clinics in the southeastern U.S. The study included pregnant Latinas in their second or third trimester and their male partners (living together or married). All participants were 18 years old or older, were born in Latin America, and had emigrated to the U.S. Participants who met study criteria were introduced to the study staff by clinic personnel, and screening questions were administered to women in a private location. If men were present at the clinics, the study staff at the clinic also screened them. Otherwise, women agreed to speak with their partners; and/or study staff followed up by phone to verbally obtain consent. When screening criteria were met and both partners agreed to participate, study staff obtained written consents and administered the questionnaire at the participants' homes or the clinic, depending on each participant's preference.

All the participants were given the choice to complete the questionnaires in English or Spanish, and all of them completed the questionnaires in Spanish. Participants responded to self-administered questionnaires at the same time but at different places to avoid sharing information. Participants were given the option to complete the survey by themselves or have the questions read to them. If participants preferred having the questions read to them, they were given instruction on where to circle their answers on the corresponding paper out of sight from the study staff. This way, we preserved participants' privacy and reduced pressures to provide socially desirable answers. In addition, questions that study staff administered some short answer after the participants completed their self-administered questionnaires. Study staff wrote down the participants' responses to the

short answer questions.

Gender and language of the study staff and participant were matched to increase comfort in answering sensitive topics (i.e., sex) in a preferred language. Participants were given $25 gift cards per couple to compensate for their time and effort.

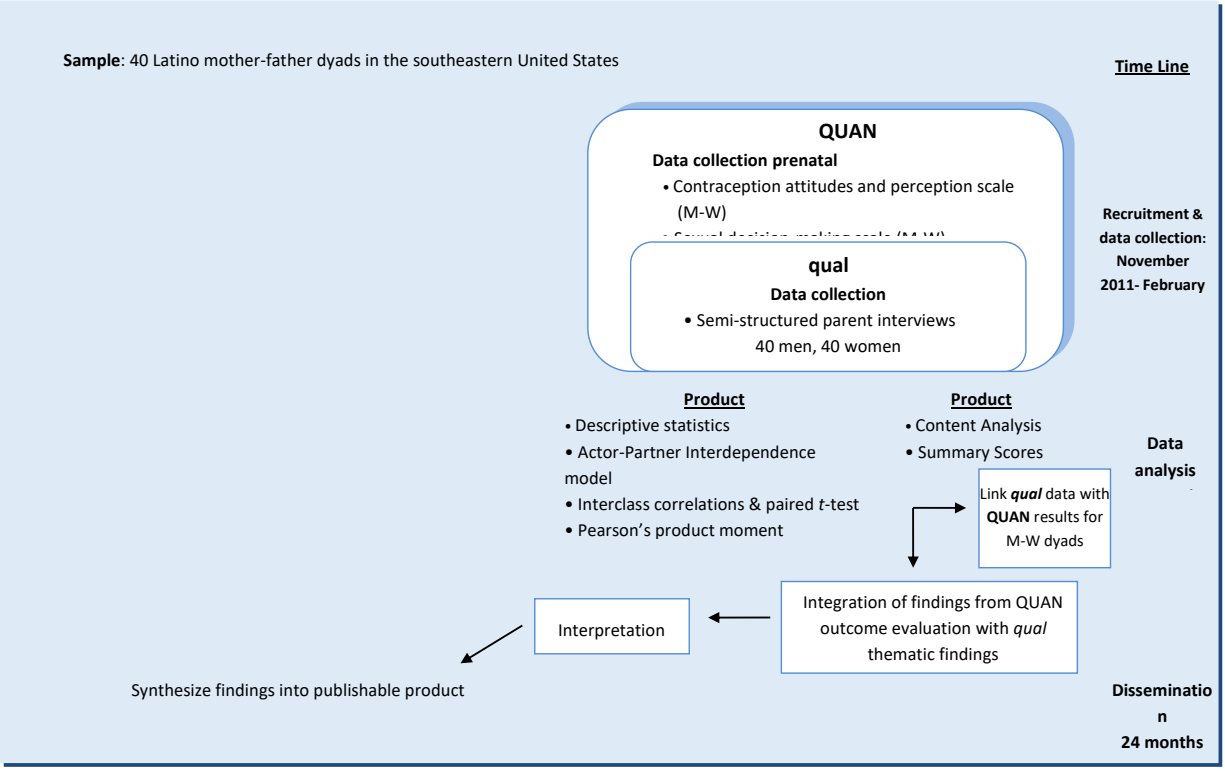


Figure 1: Conceptual diagram of immigrant Latino couples and postpartum contraception: Attitudes, perceptions and sexual decision-making featuring a concurrent embedded design

Sample size was calculated using Hauck's[16] approach to estimate power of non-independent samples. Hauck's[16] approach allows researchers to estimate an effective sample size for dyad samples by determining equivalent independent observations. Using the observed Pearson correlation for sexual decision-making (0.27), we calculated that 63 independent samples were needed for this study to provide 80% power to identify a moderate multiple R^2 of at least 27% at 5% significance. Therefore, a sample size of 40 dyads (80 individuals) was determined to be sufficient.

Participants and Data Collection Recruitment.

One hundred and thirty women were approached about the study. Of these women, 38 were excluded, the majority because they were single (n=25). Another 49 women did not complete the study: the main reasons were loss to follow up (n=28), partners were working out of town (n=8), too busy (n=7), and not interested (n=6). Forty couples were

recruited and participated in the study, with recruitment occurring between November 2011 to February 2012.

Contraception Attitudes and Perception Scale.

The Contraception Attitudes and Perceptions Scale was created by Harvey[13] and used with permission (Harvey SM 2011, oral communication, 24th April). The scale consists of 21 items and includes six dimensions to assess contraception attitudes and perception (denial/knowledge/ambivalence: eight items; norms: three items; partner: three items; side effects: two items; hassle: four items; and cost: one item). The scale was developed both in English and in Spanish and has been used in the area of HIV/STIs/unintended pregnancy prevention research.

The scale consists of a 5-point Likert scale from 1 = *do not agree at all* to 5 = *completely agree*. The total score ranges between 21 and 105, with a higher score indicating more barriers towards contraception[13]. Their construct validity was examined by performing confirmatory factor analysis with the sample of recently immigrated Latinos. Model fit was assessed with standardized root-mean-square residual (SRMR) and comparative fit index (CFI). The scale met the criteria of SRMR, with less than 0.08 indicating close fit and a CFI greater than 0.9 indicating adequate fit. The internal consistency from the developer of the scale was 0.76 (Harvey SM 2011, oral communication, 24th April). The Cronbach's alpha of the scale for the current study was 0.86 (men) and 0.65 (women).

Sexual Decision-Making Scale.

The Sexual Decision-Making Scale[13] is a6-item scale that measures participation and involvement of sexual decision-making with the partner.

Respondents answer questions about degrees of involvement in sexual decision-making, which has been documented to positively correlate with contraceptive use (F=27.15, p=0.001)[23]. Participants responded on a 5-point Likert scale from 1=*not at all* to 5=*a great deal*. The score ranges from 12 to 60, with a higher score indicating more involvement with sexual decision-making.[13] The internal consistency was 0.82 for men and women combined, and the Cronbach's alpha was 0.84 and 0.78 for men and women, respectively (Harvey SM 2011, oral communication, 24th April). Harvey and her team have conducted studies to prevent HIV/STI by increasing consistent condom use for immigrant Latino couples. Permission had been obtained to use the scale. The scale is validated and available in both English and Spanish. The scale's Cronbach's alpha for the current study sample was high: 0.9 (men) and 0.89 (women).

Other questions.

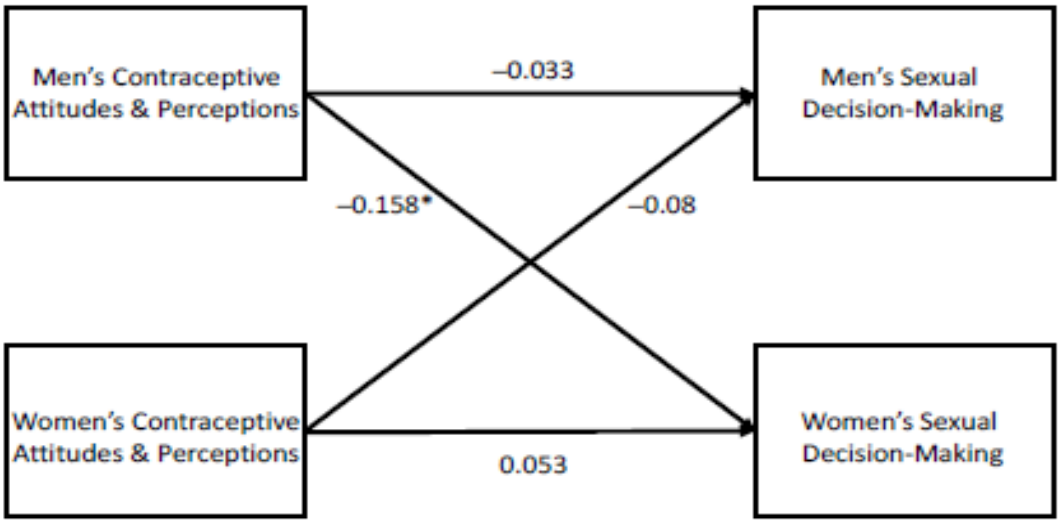
Demographic characteristics were added to established tools. Participants were asked if health care providers (HCPs) have discussed postpartum contraception with women, both women and their partner, or if they have not spoken about it. In addition, questions related to intention, plan, and rationale for postpartum contraception were asked. All questions were translated into Spanish and back translated into English to provide participants an option to complete the survey in either language. Surveys were pilot tested with Latinos with similar characteristics to

those of the potential participants to test for face validity.

Data Analysis. Descriptive statistical analysis for the demographic variables was completed. Data were analyzed using paired-tests and Cohen's kappa calculation for dyadic analysis methods established by Cohen[5] per dimensions of the scale. According to Kenny[20], it is appropriate to use a paired *t*-test for dyad data analysis for group comparison. Kenny[20] also suggest that researchers apply interclass correlation for dyad samples using Cohen's kappa statistics to examine couple-level agreement. The counts and percentages are calculated according to the contraceptive methods that a couple or men and women intend to use, respectively. Based on their intentions for contraceptive method use, the percentage of couples who agreed on methods was calculated. Short answer rationale for choosing/not choosing contraceptive method was categorized according to the major themes using content analysis[17]. Conventional content analysis, creating themes that directly derived from data without using a pre-existing framework or theory, was done to extract themes that directly emerged from the data. The first author categorized the main themes, the study's RA independently categorized the main themes, and the two discussed as disagreement arose. The second author then reviewed the themes and discussed the findings with the first author. The counts and percentages of answers in each category were subsequently calculated. In addition, the reasons for using each method were listed, per contraceptive method. The JMP and SPSS statistical software were used to analyze the quantitative data.

The Actor-Partner Interdependence Model (APIM) was used to analyze the relationship between contraceptive attitudes and perception, and sexual decision-making. The APIM was created by Kenny[21] as a statistical method that takes into account dyadic data, which refers to any type of data collected from paired or non-independent samples (e.g., couples, mothers and their children). The APIM model is a statistical model but has been used as a theoretical model for previous studies[21, 22, 24, 25]. For this study, the non-independent sample was couples (men and women). The unique part of the APIM is that it quantifies associations not only between men's independent variable and men's dependent variable (referred to as men's actor effect), but also between women's independent variable and men's dependent variable (referred to as women's partner effect; Figure 2). In the same way, the APIM allows researchers to examine associations between women's independent variable and women's dependent variable (referred to as women's actor effect), but also between men's independent variable and women's dependent variable (referred to as men's partner effect). To focus on the main effects in the analysis, differences between men's and women's actor and partner effects as well as error terms were not reported. Mplus 6.12 was used to conduct the analyses.

Figure 3. APIM for Contraceptive Attitudes and Perceptions and Sexual Decision-Making



*$p<0.05$

RESULTS

Demographic Characteristics

Approximately half (men: 42.5%; women: 47.5%) of participants were Mexican, and the remaining were from Central American countries (see Table 1). The average participant age was 28.2 years (men; SD = 5.7) and 26.5 years (women; SD = 4.8). Average gestational age of the fetus was 28.5 weeks (SD = 7.8). Over a third of the participants had completed elementary school (men: 37.5%; women: 52.5%) or high school (men: 47.5%; women: 45%). About half identifies themselves as Protestants (men: 47.5%; women 50%), and the other half identifies themselves as Catholics (men: 47.5%; women 45%). The participants' average time in the U.S. was less than ten years (men: M = 7.8, SD = 5; women: M = 6.7, SD = 4.3). Couples had been living together/married for an average of 4.8 years (SD = 4.3). Seventy percent of the couples were living together but not married. Many participants had children from previous relationships (women: 43%; men: 28%). The average monthly household income was $1,541. The majority of the women (57.5%) reported that they had discussed postpartum contraception with HCPs during their prenatal care visits. Fifteen percent of the women stated that both they and their partners had conversations with HCP about postpartum contraception, 57.6% said they talked with HCP about this topic without their partners, and 27.4% reported they had not discussed postpartum contraception with their HCPs.

Table 1. Participants' Demographic Characteristics by Percentage or Mean

Individual characteristics	Women (*n*=40)	Men (*n*=40)
Country of origin, *%*		
Mexico	47.5	42.5
El Salvador	27.5	22.5
Honduras	27.5	17.5
Guatemala	12.5	15
Other Central American Countries	N/A	2.5
Education, *%*		
No formal education	N/A	5
1-6th grade	52.5	37.5
7-12th grade	45	47.5
College or more	2.5	10
Age, yrs *M*(*SD*), range	26.5 (4.8) 20-43	29.8 (6.0) 22-45
Gestational age of the fetus, wks *M*(*SD*), range	28.5 (7.8) 14-40	N/A
Time in the U.S., yrs *M*(*SD*), range	6.7 (4.3) 0-21	7.8 (5.0) 1-24
Religious belief identification, *%*		
Protestant	50	47.5
Catholic	45	47.5
Other	5	5
Existence of children from previous Relationship, *%*	43	28
Couple characteristics		
Length of relationship, yrs *M*(*SD*), range	4.8 (4.3)	0-20
Relationship status, *%*		
Living together ("acompañado" or "juntado)	70	
Married	30	
Average monthly household income, *$ M*(*SD*), range	1,540 (856.6)	100-4,000

Contraception attitudes and perceptions: Differences between men and women

Average overall scores of the contraception attitudes and perceptions scale were 49.97 (SD = 17.11) for men and 44.95 (SD = 11.49) for women (Table 2). There was no statistical difference with the overall average scores between men and women. However, there were significant differences in scores between men and women for 4 of the 6 established dimensions (denial/knowledge/ambivalence, norms, partner, side effects, hassle, and cost) at the group level. First, men's scores (M=5.62, SD=3.53) were significantly higher than women's (M=3.73, SD=1.58) on the partner dimension (comfort in communicating about contraceptives, respondents' perception of what partners think of contraceptive use; two-tailed: t(39)=3.34, p=0.002). Second, men's scores (M=7.42, SD=3.14) were significantly higher than women's (M=6.01, SD=3.34) on the side effects dimension (how worried they are and they perceive their partners are about side effects of contraceptives; two-tailed: t(39)=4.87, p=0.046). Third, men's scores (M=11.87, SD=4.62) were significantly higher than women's (M=9.54, SD=3.88) on the hassle dimension (how much one perceived using contraceptives as a burden; two-tailed: t(39)=-3.29, p=0.002). Fourth, men's scores (M=2.31, SD=1.74) were significantly lower than women's (M=1.25, SD=0.93) on the cost dimension (indicating that men perceived the cost of birth control as a barrier for its use; two-tailed: t(39)=-0.874, p=0.02). The six dimensions were also examined for dyad-level comparison (between individual couples) using interclass correlation. The interclass correlations ranged from -0.019 to 0.048. None of the interclass correlations were statistically significant. Of note, despite the fact that nearly half of the participants reported their religion as Catholic, both among women and men, over 85% of the participants disagreed that using contraception is against their religious beliefs.

Table 2. Contraception Attitudes and Perceptions: Overall Scores and Differences between Women and Men.

	Mean Score ± *SD*		*t*	p-value	interclass correlation
	Women	Men			
Overall Score	44.95±11.49	49.97±17.11	-1.68	0.1	0.03
Denial/knowledge/ Ambivalence	18.92±7.36	18.23±7.11	-0.425	0.673	0.02
Norms	5.15±2.77	5.12±3.74	-0.034	0.97	0.05
Partner	3.73±1.58	5.62±3.53	3.34	0.002	-0.02
Side Effects	6.01±3.34	7.42±3.14	2.06	0.046	0.03
Hassle	9.54±3.88	11.87±4.62	0.25	0.018	0.03
Cost	1.25±0.93	2.13±1.74	-0.874	0.02	-0.13

Contraceptive Planning and Methods

Ninety-five percent of the women and 90% of the men planned to use contraception (either themselves or their partners) after childbirth, and the methods they planned to use varied (Table 3). Thirty-three percent of the women said that they planned to use an intrauterine device (IUD) after delivery, and 25% of the women said they planned to use injections. For men, 20% said their partner planned to use injections, and 18% planned to use condoms as the only method of contraception. Sixty-three percent of the couples (25 couples) did not agree on the method of choice, or both partners chose less effective methods of contraception or were not sure about what to use.

Short answer questions asking about the rationale for choosing or not choosing a contraceptive method were categorized according to the reasons using conventional content analysis.17Seven categories emerged: (a) concern about side effects; (b) practicality; (c) effectiveness; (d) previous experiences; (e) referral from others; (f) lack of knowledge; and (g) ambivalence. Twenty-three percent of men rated effectiveness of the method as the reason for their contraceptive method choice. Eighteen percent of men were unsure or ambivalent

about contraceptive use or which methods to use. Twenty-five percent of women rated effectiveness and ease of use/convenience/practicality as reasons for their contraceptive method choice. Table 4 provides a summary of the frequencies and percentages of men's and women's rationale for choosing or not choosing postpartum contraceptive methods. Table 5 illustrates sample quotes from each rationale. When responding to the open-ended items, six women mentioned that they preferred tubal ligation if possible.

Table 3. Postpartum Contraception Plans

Method of postpartum contraception choice for women	Number of women	%	Method of postpartum contraception choice for men	Number of Men	%
Intrauterine Device (IUD)	13	32.5	Injection	8	20
Injection	10	25	Condom	7	17.5
I don't know	5	12.5	Pill	6	15
Implant	4	10	Intrauterine Device (IUD)	6	15
Pill	3	7.5	I don't know	4	10
Contraceptive patch	2	5	Implant	2	5
Condom	1	2.5	Natural family planning	2	5
Natural family planning	1	2.5	None	2	5
Other (Injection or implant)	1	2.5	Patch	1	2.5
Vaginal ring	0	0	Vaginal ring	1	2.5
None	0	0	Other (Tubal ligation only)	1	2.5
Total	40	100	Total	40	100

Table 4. Reason for Choosing/Not Choosing Postpartum Contraceptives

Reasons for women	Number of women	%	Reasons for men	Number of men	%
Practicality	10	25	Effectiveness	9	23
Effectiveness	10	25	Ambivalence	7	18
Previous experiences (negative)	8	23	Concern about side effects	6	15
Referral from others	7	18	Practicality	6	15
Concern about side effects	6	15	Lack of knowledge	5	13
Previous experiences (positive)	5	13	Referral from others	2	5
Ambivalence	3	8	Previous experiences (positive)	2	5
Lack of knowledge	2	5	Previous experiences (negative)	1	3
Missing	3	8	Missing	3	8

Notes: 13 (1 men and 12 women) people answered more than one category of reasons.
IUD (intrauterine device)
HCPs (health care providers)

Table 5. Example Quotes of Reason for Choosing/Not Choosing Postpartum Contraceptives

Reasons for women	Example quotes	Reasons for men
Practicality	(Chose injection) Because I can change to another method easily if I do not like it.	Effectiveness
Effectiveness	(Chose IUD) Because I heard that I can delay my pregnancy for couple of years.	Ambivalence
Previous experiences (negative)	I had got pregnant while I was taking pills, I had too much bleeding (her choice is IUD).	Concern about side effects
Referral from others	My niece said she uses IUD and likes it.	Practicality
Concern about side effects	(Chose IUD) I used injection for 2 and half years and my weight increased and I had shortness of breath.	Lack of knowledge
Previous experiences (positive)	I used IUD before and worked.	Referral from others
Ambivalence	Because I know IUD works. I used it here and in my country.	Previous experiences (positive
Lack of knowledge	I did not get pregnant for five years (so I do not need to use any methods).	Previous experiences (negativ
Missing	N/A	Missing

Notes: 13 (1 men and 12 women) people answered more than one category of reasons. IUD (intrauterine device) HCPs (health care providers)

Dyad Contraceptive Attitudes and Perceptions and Sexual Decision-Making. Associations between men's and women's contraceptive attitudes and perceptions and sexual decision-making were examined using the Actor-Partner Interdependence Model analysis (see Figure 3). Independent variables were men's and women's contraceptive attitudes and perceptions, and dependent variables were men's and women's sexual decision-making. There was a significant negative relationship between men's contraceptive attitudes and perceptions, and women's sexual decision-making ($\beta = -0.158$, $p = 0.005$). Therefore, men's partner effect on sexual decision-making was significant. When men indicated more barriers towards contraceptives, women indicated lower rating on their own sexual decision-making. This negative relationship also means that when men indicated fewer barriers towards contraceptives, women indicated higher rating on their sexual decision-making. Therefore, men's partner effect on sexual decision-making was significant.

DISCUSSION

In our study examining immigrant Latino couples' attitudes and perceptions towards contraception, the APIM analysis showed that there was a negative relationship between men's attitudetowards contraception and women's sexual decision-making. This means that when men perceived fewer barriers towards contraception, women's sexual decision-making increased. Research has shown that male partners' involvement and decision-making are associated with consistent contraceptive use in women[6, 9, 31,35].

Consistently, this study demonstrated that men who themselves havenegative attitudes towards contraception create additional barriers for their female partners' sexual decision-making. The authors believe that the results from qualitative components of this study provide further insight into men's contraceptive attitudes and perceptions, thus help us understand how to improve efforts towards assisting couples in deciding on the best postpartum contraceptives.

The group-level analysis of men's and women's contraceptive attitudes and perceptions showed that men's scores were significantly higher in 4 out of 6 dimensions. In the partner dimension, men's scores were significantly higher than those of women. The partner dimension of the contraceptive attitudes and perceptions scale contains questions such as "discussing birth control with my partner is embarrassing" and "my partner does not want me to use birth control."

The results indicate that more men felt embarrassed and thought their partners did not want them to use contraceptives. It is unknown whether this is from experiences of couples talking about contraceptives or anticipation of negative reactions only.

Higher scores in cost and side effects suggests that the men's perceptions were at odds with the actual reality of contraceptives. For example, contraceptive services were offered at the clinics through a sliding scale fee system or were even free. IUDs were available free of charge through grants at the time of the study recruitment. In a study,[18] men described the financial aspect of health care as overwhelming and confusing. On the side effects dimension, although quantitative findings indicated that men perceived side effects as more severe than women, qualitative findings did not indicate any differences in number of responses as the reasons for contraceptive use/non-use (15% of women and men respectively).

Although the denial /knowledge/ambivalence dimension was not one of the significant dimensions, qualitative results revealed that men tended to be ambivalent or lack basic contraceptive knowledge. In response to the short answer questions, 18% of men said that they were not sure about contraceptive methods, and 15% did not know what to answer because of lack of knowledge. Harvey[14] reported that Latino men expressed lack of knowledge and education about contraception, since the topic was never discussed when they grew up. It is not that men were not interested, but that they simply never had the opportunity to learn. The focus of prenatal care is on women, and prenatal care visits are during the day when men are typically working. It is important to recognize the difficulty men may face in taking time off work and/or family financial responsibilities to attend prenatal visits with their partners. In addition, their partners cannot work their often physically demanding jobs towards the end of their pregnancies and after childbirth.

Although many are concerned about the effects of Catholic religious teachings on contraceptive use for this population[34], over 85% of the study participants disagreed that using contraception was against their religious beliefs. Similarly, although a majority of Latino men stated that they were Catholic, traditional Catholic beliefs seemed to have little influence on their views of contraceptive use[30]. Therefore, rather than assuming, healthcare providers need to carefully assess the role of religious beliefs on contraceptive use.

The dyad-level analysis showed no significant agreement between men's and women's scores in any dimension. The finding indicated that couples lacked agreement on attitudes and perceptions towards contraceptives. Likewise, over sixty percent of couples did not agree on methods of postpartum contraception. A high level of disagreement can result from either disagreement after conversations or a lack of communication. Either way, interventions are needed to mediate and help support couples for agreeable joint decision-making. A study examining associations between contraceptive barriers and sexual communication with partners found that when men perceived fewer barriers towards contraception, they and their partners engaged in more open

sexual communication[24]. Associations between lower contraceptive barriers and more open sexual communication suggests that intervening with men's contraceptive barriers would lead to multiple positive outcomes.

The challenges to promoting postpartum contraceptive use are multi–dimensional. They include individual level factors such as convenience, practicality, past experiences, side effects, ambivalence, and lack of knowledge, all themes that emerged from the current study's short answer questions. They also include couple level factors such as couples' opinions about pregnancy and childbearing (numbers and gender of children) [34]; and the negotiation and communication between partners regarding contraception and family size (e.g., working through gender power differences between couples, acculturation) [19, 11, 25, 28.]

To remediate all the differences and the dyad nature of contraceptive attitudes and perceptions, and sexual decision-making, couples intervention to improve contraceptive communication is critical. This intervention can also decrease men's barriers towards their partners, while informing them about the realities of cost and side effects. When decreasing men's barriers towards contraceptives, women's decision-making is mediated as well.

IMPLICATIONS FOR PRACTICE

The American College of Obstetricians and Gynecologists (ACOG) recommends that HCPs start conversations about postpartum contraceptives during the second trimester.[32] It is essential for HCPs to communicate with couples to help increase their contraceptive agreement.

Although covering many topics during short prenatal care visits is a challenge, prenatal checkups may be the only opportunity for immigrant Latinas to receive health care services. Studies have shown that undocumented Latino immigrants were less likely to visit HCPs on a regular basis, and more likely to perceive ethnicity and immigration status-related discrimination[26,27]. Such perceived discrimination makes Latinas to feel less open to HCPs. However, when Latino women and couples do attend prenatal visits, the HCPs have an opportunity to develop relationships and inform them about contraceptive options. With the trust they build over repeated visits, women and couples may feel at ease about bringing up their concerns regarding postpartum contraception during HCPs consultations.

LIMITATIONS

Although the current study contributes to the science by providing unique information about Latino couples' contraceptive attitudes and perceptions, the study has some limitations. This was a cross-sectional study, surveying one point in the female partner's pregnancy and does not capture couples' attitudes and perceptions over the course of their pregnancy and postpartum period. In addition, due to the small sample size, sub-analysis between discordant and concordant couples was not feasible.

Nevertheless, this study documented an important association between men's contraceptive barriers and women's sexual decision-making and highlighted disagreements about contraceptive attitudes and perceptions as well as postpartum contraceptive methods.

CONCLUSION

Many factors influence immigrant Latino couples in choosing appropriate postpartum contraceptives. This study addressed important factors in choosing them: contraceptive attitudes and perceptions, and sexual decision-making among couples. Significantly, in a dyad relationship, higher levels of contraceptive barriers for men were associated with less active sexual decision-making among women. Together, the differences found in contraceptive attitudes and perceptions among couples, their high levels of disagreement about postpartum contraceptive plans, and the dyad analysis provide insights for researchers and practitioners for intervening with couples.

These findings can be a basis for creating culturally-tailored, evidence-based interventions to facilitate contraceptive discussions and provide accurate information about contraception, particularly for men. Evidence-based interventions to improve postpartum contraceptives among Latino couples will help couples with their family-planning needs and support greater health outcomes and healthier babies and families.

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