



Original research article

The sexual and reproductive health of foreign-born women in the United States[☆]

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ABSTRACT

Objective: To explore the sexual and reproductive health (SRH) behaviors, health insurance coverage and use of SRH services of women in the United States (U.S.) by nativity, disaggregated by race and ethnicity.

Study design: We analyzed publicly available and restricted data from the National Survey of Family Growth to assess differences and similarities between foreign-born and U.S.-born women, both overall and within Hispanic, non-Hispanic (NH) white, NH black and NH Asian groups.

Results: A larger proportion of foreign-born women than U.S.-born women lacked health insurance coverage. Foreign-born women utilized SRH services at lower rates than U.S.-born women; this effect diminished at the multivariate level, although race and ethnicity differences remained. Overall, foreign-born women were less likely to pay for SRH services with private insurance than U.S.-born women. Foreign-born women were less likely to use the most effective contraceptive methods than U.S.-born women, with some variation across race and ethnicity: NH white and NH black foreign-born women were less likely to use highly effective contraceptive methods than their U.S.-born counterparts, but among Hispanic women, the reverse was true.

Conclusion: Our findings demonstrate that the SRH behaviors, needs and outcomes of foreign-born women differ from those of U.S.-born women within the same race/ethnic group.

Implications: This paper contributes to the emergent literature on immigrants in the U.S. by laying the foundation for further research on the SRH of the foreign-born population in the country, which is critical for developing public health policies and programs to understand better and serve this growing and diverse population.

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1. Introduction

Since the passing of the Immigration and Nationality Act of 1965, the foreign-born have grown from 5% to 14% of the United States (U.S.) population in 2015, and this proportion is expected to reach 18% by 2065 [1]. Foreign-born women and their families now live in every state in the country, with over half living in California, New York, Texas and Florida [2,3]. With the rapid growth of the immigrant population¹ and the

country's changing political climate, researchers and advocates alike have called for more research on the health behaviors, needs and outcomes of immigrants [4–7]. Literature suggests that immigrants, broadly, have a health advantage when compared to the U.S.-born population, with generally better birth and maternal health outcomes and lower mortality rates [8,9]. At the same time, their access to health care is often challenged due to myriad factors, such as lower rates of insurance coverage, legal restrictions that prevent eligibility for government-funded services, lack of familiarity with the health care system and language barriers [8,9]. To date, the impact of these factors on the sexual and reproductive health (SRH) behaviors, service utilization and outcomes of many immigrant groups has not been well documented.

Past research has documented disparities by nativity in specific SRH services and outcomes among women of different race and ethnicity groups. For example, foreign-born non-Hispanic (NH) white, NH black and NH Asian women are less likely to receive SRH-related cancer screenings than their U.S.-born counterparts, but findings are mixed when considering foreign- and U.S.-born Hispanic women [10–14]. Additionally, there are differences in where immigrant and U.S.-born women obtain SRH services [15]. Nativity differences in sexual activity and contraceptive use have also been documented. Overall, U.S.-born women are more likely than foreign-born women to initiate sexual

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¹ Nativity is defined as whether someone is born in the country or outside, as it is used in this paper. Nativity is sometimes, though not typically, collected with citizenship status (e.g., Census Bureau surveys, American Community Surveys and in the Current Population Surveys). Nativity is also sometimes derived from a question about place of birth alone. The National Survey of Family Growth (NSFG), the dataset we examine in this paper, lacks information on citizenship at birth. U.S. citizens born abroad to U.S. citizen parents are thus potentially included in the NSFG's foreign-born population. However, the vast majority of the foreign-born population (upwards of 95%) are immigrants [3]. Thus, in this paper, we use “foreign-born” and “immigrant” interchangeably.

activity and give birth before age 20 [16,17]. While immigrant and U.S.-born women have similar probabilities of receiving contraceptive services overall, nativity differences are seen in contraceptive use within racial and ethnic groups [15,18,19]. As the immigrant population grows and policy debates over immigration and health care remain at the forefront of the national agenda, there is a heightened need to understand better how the intersection of these two policy arenas impacts the SRH of immigrant women in the U.S.

Although the existing body of evidence points to some important differences in SRH by nativity, this literature is fragmented, sparse and incomplete. Much of the prior research consists of small, nonrepresentative studies that focus on a single racial or ethnic group or on only a few dimensions of SRH. Studies using nationally representative data typically focus on a particular race, ethnicity or country of origin (most often Latinas, specifically Mexicans), and often compare immigrants to U.S.-born NH whites rather than to their U.S.-born counterparts of the same race or ethnicity [9,19]. Furthermore, certain racial groups, such as Asians, are underrepresented in the literature, in part because national studies often do not sample enough members of these groups to represent them accurately in their datasets [5,7]. Our study aims to bridge these research gaps and contribute to the literature on immigrant SRH in the U.S. by providing a more comprehensive overview through comparisons between foreign-born and U.S.-born women of the same race and ethnicity.

2. Study design

This study pooled data from the National Survey of Family Growth (NSFG) collection years 2006–2010, 2011–2013 and 2013–2015 [20–22]. These nationally representative, cross-sectional surveys collect retrospective data from men and women aged 15–44 during in-person interviews in respondents' homes. The NSFG uses a multistage probability sampling design that oversamples black and Hispanic groups and teenagers aged 15–19. More detailed information on survey methodology, sample design, response rates, fieldwork procedures and variance estimation is published elsewhere [23]. While the majority of data are publicly available for download on the NSFG website, we accessed restricted race and ethnicity information through a data use agreement with the National Center for Health Statistics (NCHS). Accessing this restricted data allowed us to study Asians by disaggregating this group from the "Other" race and ethnicity category. We conducted analyses of the restricted data at the NCHS Data Center in Hyattsville, MD, in June 2017.

The analytic sample included all female respondents ($n=23,573$). We focused our analysis on four mutually exclusive race and ethnicity groups – Hispanics, NH whites, NH blacks and NH Asians – and did not include "Other" as a separate group. For each of the four examined groups, we stratified respondents by nativity (born inside the U.S. or outside). We examined a number of SRH behaviors, including contraceptive method use and contraceptive method effectiveness. We also analyzed SRH service utilization and form of payment for SRH services. For SRH service utilization, we examined whether respondents reported utilizing any of the following services: birth control counseling, birth control checkup, birth control method or prescription, sterilization counseling, sterilization operation, emergency contraception counseling, emergency contraception pill or prescription, pap test, pelvic exam, testing/treatment/counseling for STD, test for HIV, pregnancy test, prenatal care and postpregnancy care.

We performed all analyses using Stata version 14.2. Due to the NSFG's multistage, probability-based complex sample design, we applied sampling weights that yield estimates representative of the U.S. civilian, noninstitutionalized, household population aged 15–44. In addition, we used design variables for the sampling stratum and cluster to obtain correct standard errors for all estimates.

We stratified survey respondents into eight groups, by race, ethnicity and nativity. We calculated descriptive statistics on all variables used in our regression analyses; proportions and means were weighted. We

then performed *t* tests and bivariate logistic regressions to identify differences between U.S.-born and immigrant respondents for each of the race and ethnicity groups. We employed logistic regression models to determine the likelihood of any contraceptive use, highly effective method use, utilization of SRH services and type of payment of SRH services, controlling for demographic and socioeconomic predictors (specifically age at interview, household income, relationship status, employment status, level of educational attainment, insurance status, urbanicity, age at first sex and parity). We limited these multivariable logistic regressions to women 20–44 years old to account for completed educational attainment.

3. Results

3.1. Contraceptive use

Relative to U.S.-born women, foreign-born women were less likely to have sexual intercourse for the first time before age 20 (62% vs. 86%, $p<.001$, Table 1). Correspondingly, immigrant women were less likely than U.S.-born women to have given birth before the age of 20 (27% vs. 32%, $p=.001$). This pattern of results was similar across Hispanic, NH white, NH black and NH Asian comparisons by nativity.

The majority of women at risk of unintended pregnancy across all groups reported using contraception; rates ranged from 82% to 91%. Contraceptive use was not different between immigrant and U.S.-born women overall, or by most racial and ethnic subgroups (Table 1). However, among NH white women, immigrants were less likely to use contraception than their U.S.-born counterparts (85% vs. 91%, $p=.02$). We found no discernable difference overall between foreign- and U.S.-born women regarding their utilization of highly effective methods (including sterilization, IUDs and implants) ($p=.53$). Upon disaggregating method use by race and ethnicity, however, we found that foreign-born Hispanic women were more likely to use a highly effective method than U.S.-born Hispanic women (53% vs. 41%, $p<.001$). Conversely, foreign-born NH white and NH black women were less likely to use highly effective methods than their U.S.-born counterparts ($p<.001$ and $p=.007$, respectively). As a whole, immigrant women were less likely to be users of moderately effective methods (including condoms, contraceptive injection, pill, ring and patch) than U.S.-born women (24% vs. 35%, $p<.001$). We found the same trend comparing women in the Hispanic and NH Asian groups by nativity (Table 1). Lastly, foreign-born NH black, NH white and NH Asian women were more likely to use less effective methods (including spermicide, sponge, gel, cream and withdrawal) than U.S.-born women of the same group ($p<.001$, $p=.003$ and $p<.001$, respectively).

3.2. Health insurance coverage and utilization of SRH services

Immigrant women were more likely to be uninsured than U.S.-born women (33% vs. 16%, $p<.001$, Table 2); this disparity was particularly strong among Hispanic women. Moreover, immigrant women, overall, lacked both private and public coverage compared to U.S.-born women (49% vs. 63%, $p<.001$ and 18% vs. 21% $p=.009$, respectively). This pattern was particularly strong among Hispanics.

A smaller proportion of immigrant women reported utilizing SRH services than U.S.-born women (69% vs. 73%, $p=.001$, Table 2). Among women who obtained SRH services, fewer foreign-born women, overall, than U.S.-born women received their SRH care from a private clinician (60% vs. 75%, $p<.001$). Foreign-born women went to both Title X and other clinics at higher rates than U.S.-born women. After disaggregating by race and ethnicity, however, this trend was found only among Hispanic women.

Type of payment used for SRH services also varied by nativity. Overall, immigrants were less likely than U.S.-born women to pay for SRH services with private insurance (50% vs. 64%, $p<.001$) and were nearly twice as likely to pay for these services out-of-pocket (28% vs. 16%,

Table 1
Sexual activity and contraceptive use among U.S.-born and immigrant women by race and ethnicity (NSFG 2006–2015)

	All races/ethnicities (n=23,573)				Hispanic (n=5574)			NH white (n=11,237)			NH black (n=4696)			NH Asian (n=1028)		
	All women	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value
Overall %	100	85	15		56	44		96	4		91	9		31	69	
First sexual intercourse under age 20 years	82	86	62	.00	89	71	.00	84	72	.00	93	65	.00	76	30	.00
Age at first live birth																
Under 20 years	31	32	27	.00	46	37	.00	25	13	.01	49	19	.00	32	6	.00
20–29 years	55	54	59	.00	47	55	.00	58	67	.06	46	58	.04	50	64	.11
30–44 years	14	14	14	.66	7	8	.45	18	21	.39	5	22	.00	18	30	.13
Currently using contraceptive method, among women at risk of unintended pregnancy ^a	89	89	88	.10	87	89	.32	91	85	.02	85	82	.33	89	89	.97
Highly effective ^b	43	43	42	.53	41	53	.00	43	27	.00	45	31	.01	26	29	.63
Moderately effective ^c	34	35	24	.00	32	22	.00	36	35	.71	31	31	.93	48	17	.00
Less effective ^d	23	21	34	.00	27	25	.31	20	38	.00	23	38	.00	26	54	.00

n=unweighted sample size. All percentages weighted to reflect national population estimates. p values represent significance levels from t tests of differences between U.S.-born and immigrant women by race and ethnicity.

^a “At risk of unintended pregnancy” refers to women who are sexually active with men; not pregnant, seeking to become pregnant, or postpartum; and not noncontraceptively sterile.

^b “Highly effective” methods include sterilization, IUD and implants.

^c “Moderately effective” methods include condoms, contraceptive injection, pill, ring and patch.

^d “Less effective” methods include spermicide, sponge, gel or cream, and withdrawal.

Table 2
Percent of women utilizing sexual and reproductive health care by race, ethnicity and nativity (NSFG 2006–2015)

	All races/ethnicities (n=23,573)			Hispanic (n=5574)			NH white (n=11,237)			NH black (n=4696)			NH Asian (n=1028)		
	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value	U.S.-born	Immigrant	p value
Overall %	85	15		56	44		96	4		91	9		31	69	
Insurance type															
Private insurance	63	49	.00	48	30	.00	71	68	.47	45	59	.00	72	77	.57
Public/gov't insurance	21	18	0.01	31	22	.00	15	12	.12	36	21	.00	18	13	.39
No coverage	16	33	0.0	21	48	.00	14	20	.03	18	20	.49	9	11	.64
Received any SRH service, including HIV	73	69	.00	67	70	.03	72	70	.45	80	76	.33	65	62	.43
Type of provider, if any SRH service received															
Private clinician	75	60	.00	67	48	.00	81	80	.57	64	64	.91	68	78	.07
Title X clinic	10	15	.00	13	21	.00	8	8	.88	14	11	.43	9	4	.08
Other clinic	15	25	.00	20	31	.00	11	12	.57	21	25	.29	23	17	.28
Type of payment used, if any SRH service received															
Private insurance	64	50	.00	48	32	.00	72	77	.14	46	61	.00	73	77	.69
Medicaid	20	21	.39	30	28	.28	14	11	.28	38	19	.00	8	12	.19
Out-of-pocket/free care	16	28	.00	21	41	.00	14	12	.39	16	20	.28	19	10	.07

n=unweighted sample size. All percentages weighted to reflect national population estimates. p values represent significance levels from t tests of differences between U.S.-born and immigrant women by race and ethnicity.

Table 3
Logistic regression: select outcomes of interest by race and ethnicity. Odds of immigrant women compared to U.S.-born women (NSFG 2006–2015)^a

	All (n=17,764)	Hispanic (n=4094)	NH white (n=8605)	NH black (n=3608)	NH Asian (n=740)
	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)
Used a contraceptive method in the last month ^b	0.8 (0.7–0.94)	0.9 (0.7–1.1)	0.8 (0.5–1.1)	0.7 (0.5–0.9)	0.8 (0.4–1.5)
Used a highly effective contraceptive method in the last month ^c	0.6 (0.5–0.7)	1.0 (0.8–1.4)	0.4 (0.3–0.6)	0.4 (0.2–0.7)	0.5 (0.2–1.1)
Received a sexual/reproductive health service ^d	1.0 (0.8–1.1)	1.3 (1.0–1.7)	0.8 (0.5–1.1)	0.5 (0.3–0.9)	0.4 (0.2–0.7)
Used private health insurance to pay for sexual/reproductive health service received ^e	0.6 (0.5–0.8)	0.7 (0.5–1.0)	1.1 (0.7–1.8)	0.7 (0.4–1.2)	0.7 (0.2–1.8)

AOR, adjusted odd ratio; CI, confidence interval from multivariate logistic regression differences between immigrant and U.S.-born women by race and ethnicity.

^a Controlling for age at the time of interview, low-income status, relationship status, educational attainment, employment status, urbanicity, age at first sex, parity, insurance status and NSFG cycle. Limited to women 20 years and older.

^b Compared to nonuse of contraceptives.

^c Compared to women who used moderately or low effective methods, among contraceptive users.

^d Compared to no receipt of sexual/reproductive health service.

^e Compared to use of public health insurance or out-of-pocket payment, among women who received a sexual/reproductive health service.

$p < .001$). We found this overall pattern in payment type by nativity among Hispanic women but not among NH white, NH black and NH Asian women.

3.3. Multivariate results

To further explore whether differences in contraceptive use and SRH service utilization between immigrant and U.S.-born women were robust, we employed multivariable regression, controlling for confounders (i.e., age at interview, household income, relationship status, employment status, level of educational attainment, insurance status, urbanicity, age at first sex and parity). We found foreign-born women to be less likely than U.S.-born women to use a contraceptive method in the last month (Table 3). Upon disaggregating by race and ethnicity, however, this result was significant only among immigrant NH black women. Foreign-born women, overall, were also less likely than U.S.-born women to use highly effective methods (Table 3). We found this result among NH white, NH black and NH Asian women but not among Hispanic women. The relationship between nativity and SRH service utilization among all women disappeared in our regression models, except among foreign-born NH Asian women, who were less likely to receive SRH services than U.S.-born NH Asian women (Table 3). Immigrants were also less likely to use private insurance than U.S.-born women. After disaggregating, this result remained evident among Hispanic women but not other groups.

4. Discussion

We found that the SRH behaviors and outcomes of immigrant women differ from those of their U.S.-born counterparts of the same race and ethnicity. Variation in immigrant women's SRH reflects the heterogeneity of immigrant women, who differ from one another in country of origin, language skills, emigration experiences, legal immigration status, residential location, educational attainment, employment opportunities, and experience of stigma, discrimination and marginalization [2,8,24–26].

Structural, cultural, economic and social factors contribute to the observed differences presented here by immigrant status. For example, the myriad of federal and state laws and policies barring immigrants from affordable health insurance coverage likely contributes to disparities in health coverage and outcomes between immigrants and nonimmigrants [27,28]. Accessing contraceptive services and providers may also be more difficult for some immigrants due to language barriers, unfamiliarity with the health system, and a lack of multilingual services and providers who can provide contraceptive counseling and education [10,29].

While we selected the NSFG because it provided the best set of SRH measures collected at the national level and also included nativity, race and ethnicity information, there were important limitations with this

dataset. The NSFG does not ask about legal status, country of origin or nativity of respondents' parents (which determines generational cohort); thus, we were unable to include comparisons among immigrants by these more refined dimensions, which have been documented as factors influencing immigrant health [14,30,31]. Legal status can affect access to and use of health care services and, consequently, can result in differences in health status over time [32,33]. Furthermore, a growing body of literature suggests that age of arrival and length of stay in the country may also affect immigrant SRH behaviors and outcomes [34]. The nativity of respondent's parents is also important since some evidence suggests differential access to health care services by generational cohort [35]. In addition, state of residence and English language proficiency could affect immigrants' experience with the U.S. health care system [8,9]. However, these factors are similarly not measured in the NSFG. These data are also not representative at the state level. Consequently, we were not able to assess the effects of state policies on the use of and access to SRH services. Although many immigrants are barred from Medicaid coverage and from subsidized private coverage under the Affordable Care Act, some states provide alternative pathways to health care coverage and services; California, for example, provides free access to family planning services to all California residents living at or below 200% of the poverty line, regardless of legal status state residence [27,36]. A final constraint of our study was the inability to conduct more granular comparisons, such as examining specific nationalities (e.g., comparisons among Chinese and Indian women) instead of the broader groups defined here, because of the small number of respondents in such disaggregated groups.

This study lays the groundwork for future research that explores the underlying motivations, contexts and determinants of disparities in immigrant SRH. Further research is critical to address the specific needs of these diverse and growing communities. In particular, there has been almost no prior work investigating how social, cultural and structural factors shape the relative SRH disparities or advantages of different immigrant groups.

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