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Women's Preferred Sources for Primary and Mental Health Care: Implications for Reproductive Health Providers

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Abstract

Purpose—To describe women's preferences for reproductive health providers as sources of primary and mental health care.

Methods—Secondary data analysis of the Women's Health Care Experiences and Preferences Study, an internet survey conducted in September 2013 of 1,078 women aged 18–55 randomly sampled from a U.S. national probability panel. We estimated women's preferred and usual sources of care (reproductive health providers, generalists, other) for various primary care and mental health care services using weighted statistics and multiple logistic regression.

Main Findings—Among women using healthcare in the past five years ($n=981$), 88% received primary and/or mental health care, including routine medical check-up (78%), urgent/acute (48%), chronic disease (27%), depression/anxiety (21%), stress (16%), and IPV (2%) visits. Of those, reproductive health providers were the source of check-up (14%), urgent/acute (3%), chronic disease (6%), depression/anxiety (6%), stress (11%), and intimate partner violence (3%) services. Preference for specific reproductive health-provided primary/mental health care services ranged from 7–20%. Among women having used primary/mental health care services ($N=894$), more women (1–17%) preferred than had received primary/mental health care from reproductive health providers. Nearly a quarter (22%) identified reproductive health providers as their single most

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DISCLOSURES

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preferred source of care. Contraceptive use was the strongest predictor of preference for reproductive health-provided primary/mental health care (Odds Ratios range 2.11–3.30).

Conclusions—Reproductive health providers are the sole source of healthcare for a substantial proportion of reproductive-aged women – the same groups at risk for unmet primary and mental health care needs. Findings have implications for reproductive health providers’ role in comprehensive women’s healthcare provision and potentially for informing patient-centered, integrated models of care in current health systems.

Keywords

reproductive health providers; primary care; mental health; integrated care; patient-centered

INTRODUCTION

Prevalence rates of chronic disease and mental health conditions are rising among reproductive-aged women in the United States (CDC, 2016^b; Kaiser, 2014; Kaiser, 2005; Farr et al, 2011; Hayes et al, 2011; Ko et al, 2012; NIMH, 2016). One in ten women ages 18–44 report having a chronic disease, including hypertension, high cholesterol, asthma, other respiratory diseases, or arthritis, among others (CDC, 2016^b). One in ten women also report symptoms of major depression or anxiety disorders in the past year (Ko et al, 2012; NIMH, 2016). Rates of chronic disease and mental health conditions are even higher among poor and racial/ethnic minority women (CDC, 2016^b; Kaiser, 2014; Kaiser, 2005; Farr et al, 2011; Hayes et al, 2011; Ko et al, 2012; NIMH, 2016). While common chronic disease and mental health conditions are recognized as leading causes of morbidity and mortality, their implications for women’s reproductive health (reproductive health) and family planning have been given less attention. A growing number of research studies have shown that chronic diseases, depression, anxiety, and stress are linked with decreased fertility, perinatal and infant morbidity, “risky” sexual and contraceptive behaviors, and increased rates of unintended pregnancy and sexually transmitted infections (Williams, March, & Rasgon, 2007; Grote et al, 2010; Adler et al, 2007; Denobles et al, 2014; Chor et al, 2011; Holing et al, 1998; Davis et al, 2008; Hall et al, 2014; Hall et al, 2013). Within current public health systems and policies, however, women’s general and mental health and healthcare needs have been largely marginalized from their reproductive health and family planning issues.

Service utilization rates for primary care and mental health care are low among reproductive-aged women compared to their older counterparts and rates are disproportionate across sociodemographic groups (Kaiser, 2014; Kaiser, 2005; Ko et al, 2012; Farr et al, 2010; Lee, Casanueva, & Martin, 2005). Younger, poor, and racial/ethnic minority women are less likely to have a primary care provider for diagnosis and treatment of acute or chronic conditions (non-reproductive-related issues) or receive evidence-based preventive care services (i.e. routine health promotion, maintenance, counseling, education) compared to their older and socially advantaged counterparts (Kaiser, 2014; Kaiser, 2005). Fewer than half of all non-pregnant reproductive-aged U.S. women with a major depressive episode are diagnosed or treated; detection and treatment rates are even lower among Black, Hispanic and poor women (Kaiser, 2014; Kaiser, 2005; Ko et al, 2012; Farr et al, 2010; Lee, Casanueva, & Martin, 2005). Some existing collaborative care models have sought to

increase access to primary and mental health care by providing chronic disease or depression screening in obstetrical settings or by integrating mental health care treatment into generalist practices (Tovar et al, 2011; Robbins et al, 2011; Zera, McGirr, & Oken, 2011; Katon et al, 2010; Miller, Kessler, & Peek 2011). Yet, collaborative care models have not been widely implemented and, even when they are, do not reach all women equally (Kaiser, 2014; Kaiser, 2005).

Reproductive health providers, including family planning clinics, are often the main source of healthcare for many women – notably the very same groups of women at risk for unmet primary and mental health care needs (Kaiser, 2014; Cheng & Patel, 2011; Frost, Gold, & Bucek, 2012). Among women in their reproductive years, half (47%) see a reproductive health specialist as their regular healthcare provider (Kaiser 2005). Although many reproductive health and family planning settings have the capacity to provide more comprehensive women’s health services, efforts to address primary and mental health care have focused narrowly on perinatal and postpartum depression or basic obstetrics screening for diabetes, hypertension, and high cholesterol (Farr et al, 2010; Tovar et al, 2011; Robins et al, 2011; Zera, McGirr, & Oken 2011; Yonkers & Chantilis, 1995; Scholle & Kelleher, 2003; Schmidt et al, 1997; LaRocca et al, 2003; Dennis, Ross, & Grigoriadis, 2007). Less is known about the extent to which non-pregnant women across the reproductive life span, especially those not pregnant or intending pregnancy, receive a broader range of primary and mental health care services from reproductive health providers. Moreover, few, if any, studies have considered women’s *preferences* for reproductive health providers in their primary and mental health care - information which is important for more effective, patient-centered, integrated models of care (Katon et al, 2010; Miller, Kessler, & Peek 2011).

Such information can also inform efforts to define the role of reproductive health providers within current healthcare systems and health policy climates. Women’s insurance coverage for preventive and primary care services has expanded in recent years as a result of the Affordable Care Act and Medicaid expansion programs in many states (Kaiser, 2014). These benefits reach many women through family planning clinics, including Title X centers, other community-based safety-net facilities, and obstetricians/gynecologists in private practice (Kaiser, 2014; Frost et al, 2014). At the same time, a variety of state-level reproductive health policies introduced over the last five years have restricted women’s access to comprehensive services that are or could be offered in these settings (Frost et al, 2014). As reproductive health providers are an important source of care within this changing landscape, a baseline assessment of women’s preferences for and use of reproductive health providers for a broader range of their healthcare needs is warranted.

We estimated preferred and usual sources of primary care and mental health care, for a variety of specific services, among a national random probability sample of women in the United States. We further identified factors associated with women’s preference for reproductive health-provided primary and mental health care.

MATERIALS AND METHODS

Study Design and Sample

We have described our study design and sample in detail elsewhere (Hall et al, 2015^a). In brief, data were drawn from our cross-sectional, population-based, Women's Health Care Experiences and Preferences Study, an Internet-based survey of 1,078 U.S. women aged 18–55 years conducted in September 2013. GfK (formerly Knowledge Networks, Menlo Park, CA, USA) fielded the survey among their national household random probability panel. GfK is an existing internet-based panel comprised of 50,000 U.S. residents aged 13 and older representative of all 50 states. The GfK panel is sampled via random digit dialing telephone and probability-based address mailing methods. Individuals solicited to participate in the GfK panel but who do not have Internet access are provided with a laptop and Internet access at no cost. Each member of the panel has a unique login to allow them to access online surveys and survey invitations are sent by email. Modest incentives are used to encourage panel participation (e.g. \$4 monthly gift card). All panelists routinely update demographic data, which allows for complex, stratified sampling designs. Additional detailed information about the GfK panel and methods is at [http://www.knowledgenetworks.com/knpanel/docs/knowledgepanel\(R\)-design-summary-description.pdf](http://www.knowledgenetworks.com/knpanel/docs/knowledgepanel(R)-design-summary-description.pdf)

Among GfK panelists eligible for inclusion in our study (English-speaking women ages 18–55), a random sample of 2,520 women were emailed an invitation to participate. Of these, 1,078 completed our study (43%). Compared to respondents, non-respondents were more likely to be aged <30 years, identify as Black or Hispanic ethnicity, have <high school education, and annual incomes of <\$25,000 (all p-values<0.01), factors which we adjusted for in analyses. We applied sampling weights provided by GfK to adjust for the complex, stratified sampling design and to bring our sample in-line with national demographic benchmarks, as calculated by GfK based upon Census data. This study was approved by the University of Michigan's Institutional Review Board.

The Women's Health Care Experiences and Preferences survey included 29 items measuring women's experiences with and preferences for a variety of types and sources of healthcare, including primary care, mental health care, and reproductive health services. We also collected information on women's sociodemographic characteristics, reproductive, physical, and mental health histories and social wellbeing, relationships, health and health service behavioral intentions, and reproductive health care and policy knowledge and attitudes. The average survey completion time was 15 minutes. The survey was pilot-tested among 25 GfK panelists to ensure readability, timing of administration, and comprehension prior to administration to the larger sample.

Measures

A series of items measured women's experiences with and preferences for sources of healthcare, including primary care and mental health care services. We have reported on women's preferred and usual sources of reproductive health specific services (pap smear/pelvic exam, contraception, sexually transmitted infection testing/treatment, pregnancy)

elsewhere (Hall et al, 2015^a). Women were first asked how often on average they had seen a healthcare provider in the past five years and what type of healthcare facility they had visited most often. Women were then asked about receipt of six specific types of primary and mental health care, including routine medical check-ups, urgent or acute issues, chronic disease or ongoing medical problem, depression and/or anxiety, stress, and intimate partner violence (IPV) services.

Women who responded that they had used each type of service were then asked about their most commonly used sources of care. Response options included: “reproductive health specialist (e.g. obstetrician/gynecologist, family planning clinic); generalist/primary care/family medicine/internal medicine; urgent care/walk-in clinic; emergency medicine; mental health specialist/psychiatrist; other; or don’t know.” Due to small numbers of women reporting use of the latter seven categories, we collapsed responses into three-point categorical (reproductive health provider, generalist, or other) and binary (reproductive health provider versus other) indicators for our primary analyses.

All women were asked similar questions about their preferred sources of care for each type of health service listed above. “If cost and other barriers were not an issue, what type of healthcare provider would you most like to go to for the following health services.” The response options for preferred sources of care were also the same as above, with the addition of, “I do not need or would not get care for that issue.” An additional item assessed women’s single most preferred source “for all of your healthcare needs, if you could get them taken care of in one place” (which we herein refer to as “all care needs”).

We examined potential covariates based upon prior work (ours and others) in which meaningful associations between reproductive-aged women’s experiences with health service utilization and a wide range of demographic, social, health, and reproductive factors have been noted (Hall et al, 2015^a; 2014; 2012). Relevant factors which we explored here include age, race/ethnicity, educational attainment, income level, employment status, marital status, religious affiliation and service attendance, residence, type of health insurance, reproductive history including pregnancy, childbirth, and use of prescription/hormonal contraception (ever and in the last year), and health history including chronic disease and mental health diagnoses. We also assessed current perceived self-reported general health status (5-point Likert scale item) and any current depression or stress symptoms (any report of one or more symptoms experienced ³ “sometimes” over the last month via abbreviated versions of the standard, widely used 2-item abbreviated versions of the Patient Health Questionnaire and Perceived Stress Scale instruments).

Statistical Analysis

Our primary analytic sample included 981 women who had used health services in the past five years and responded to all primary/mental health care preferred source of care items and had available all information on sociodemographics. We applied sampling weights and employed weighted statistical commands in STATA 13.0 (College Station, Texas). We used Pearson’s Chi-square tests to estimate associations between women’s preferred sources of care (reproductive health provider, generalist, other) and sociodemographic, reproductive and health background characteristics. We used multivariable logistic regression to further

explore potential factors associated with preferred sources of care (reproductive health provider versus other). Given the hypothesis-generating nature of our analysis of predictors of preference, all sociodemographic, reproductive, and health characteristics with p -values < 0.025 in bivariate tests were considered for inclusion as a conservative approach. For factors that were collinear (e.g. sexual and reproductive history variables), we retained those with the strongest effects. We present results from full models, with adjusted odds ratios (aOR) and 95% confidence intervals (CI). P -values < 0.05 were considered significant.

We also conducted sub-analyses among the 894 women who reported having had one or more visits for specific primary care/mental health care services. Among these women, we employed Pearson's Chi-square to compare proportions of sources of care preferred versus sources used, for each type of primary care and mental health care service. We also assessed the level of agreement between preferred and usual sources with Kappa statistics, which reported significant differences between the proportions of agreement and proportions of expected agreement. These results are presented as weighted proportions.

RESULTS

Health Service Use

Sample characteristics are presented in Table 1. Health service characteristics are presented in Tables 2 and 3. Among women reporting healthcare utilization in the past 5 years ($n=981$), 49% reported using services more often than annually. The most common type of setting visited was private/HMO/employer-based practices (75%). Nearly all women ($n=894$, 88%) reported at least one primary care or mental health care visit. Types of primary and mental health care received included routine medical check-up (78%), urgent/acute (48%), chronic disease/ongoing medical problem (27%), depression/anxiety (21%), stress (16%), and IPV (2%) services. Of those 894, the majority received primary/mental health care services from a generalist or other sources, while reproductive health providers were the source of check-up (14%), urgent/acute (3%), chronic disease (6%), depression/anxiety (6%), stress (11%), and IPV (3%) visits.

Preferred Sources for Primary and Mental Health Care

Women's preferred sources of primary and mental health care are presented in Table 3. Among women reporting healthcare use in the past five years ($n=981$), in many cases the majority preferred generalists for their primary care (range 32–86%) and other sources or generalists for their mental health care (range 44–49%). However, a non-trivial proportion reported reproductive health providers as their preferred source of primary and mental health care (range from 7% for depression/anxiety/stress to 20% for IPV services). A quarter (22%) identified reproductive health providers as their single most preferred source if they could get all healthcare needs addressed in one place.

Agreement rates between preferred and usual sources of care are also presented in Table 3. Among women who reported having used primary/mental health care services ($n=894$), preference rates for reproductive health provider-delivered primary and mental health care were higher than for the rates of care actually received from reproductive health providers,

for all types of services except stress. While levels of agreement between preferred and usual care sources were high overall, women who preferred to receive their primary and mental health care services from a reproductive health provider were less likely to have their preferences met than were women who preferred to receive those types of care from a generalist or mental health specialist. In other words, the proportions of agreement were up to 64 percentage points lower for women preferring and receiving their care from reproductive health providers as compared to those preferring and receiving their care from generalists.

Factors Associated with Preference for Reproductive Health-Provided Primary and Mental Health Care

In multivariable regression models estimating preferred sources of care among women who reported healthcare use in the past 5 years (n=981), recent contraceptive use was the strongest, most consistent predictor of preference for reproductive health-provided primary care and mental health care (Table 4). For all types of services except stress, women with prescription/hormonal contraceptive use in the past year had over twice the odds of preferring reproductive health providers versus other sources for their primary care and mental health care compared to those without contraceptive use (aOR range 2.11–3.30). Black women also had over twice the odds of preferring reproductive health providers for all care needs (aOR 2.66) and urgent care (aOR 2.61) as compared to White women. Similar effects were noted for low income women – with higher income levels associated with lower odds of preferring reproductive health providers for check-up, urgent and chronic disease care compared to women with incomes <\$25K (aOR range 0.16–0.48). Other factors associated with higher odds of preferring reproductive health providers for some types of primary care and MCH services included religious affiliation and older age, while chronic disease history and Medicaid (versus private) insurance were associated with lower odds of preferring reproductive health providers for some types of services (Table 4). Results were consistent in unadjusted analyses (not shown).

DISCUSSION

Our focus on women's *preferences* for primary and mental health care addresses an important dimension of patient-centeredness that has been under-studied in integrated care research but has implications for continuity of care, greater patient comfort and satisfaction, and ultimately improved women's health service utilization and outcomes (Farr et al, 2011; Katon et al, 2010; Miller, Kessler, & Peek, 2011). While in most cases the majority of women preferred generalist or mental health specialists for their primary and mental health care, we found that a non-trivial proportion of our overall sample preferred reproductive health providers for this care. Additionally, among primary/mental health care health service users, women preferring reproductive health providers were less likely to have had their preferences met than those preferring and receiving care from generalists and other providers. While it was perhaps not surprising that women with ongoing medical problems generally had lower rates of preference for reproductive health-provided primary care and mental health care compared to healthy women, contraceptive users had much higher rates of preference for reproductive health providers for nearly all services, even after controlling

for health history. Given that obstetrician/gynecologist practices and family planning clinics are often a primary source of care for many reproductive-aged women, reproductive health settings may be an underutilized point of access for more comprehensive women's health services (Kaiser, 2014; Cheng & Patel 2011; Frost, Gold, & Bucek, 2012, Cwiak & Allen, 2014). On the other hand, our findings may also reflect preferences that have been shaped by women's lack of awareness and understanding that many primary care providers are able to provide routine preventive reproductive health services (i.e. gynecologic exams, contraceptive provision) and can serve as an additional access point.

We also found some sociodemographic disparities in women's sources of preferred and usual primary and mental health care. Black women and women with the lowest income level were more likely to prefer reproductive health providers versus other sources for all of their care needs and some types of primary care services than their socially advantaged counterparts. These same groups also experienced higher rates of discordance between their preferred and usual sources of primary and mental health care (i.e. they had higher preference rates for reproductive health providers than rates of care actually received from reproductive health providers). We did not find the same trend for women on Medicaid, which is perhaps not surprising since Medicaid-insured women have historically experienced access to a range of healthcare services, including primary care and mental health care services. Publicly-funded family planning clinics and reproductive health specialists in other safety-net settings have historically helped fill a healthcare gap for young, minority, poor, and uninsured women who disproportionately experience high rates of adverse chronic disease and mental health outcomes but who are unlikely to use primary care providers or mental health specialists (CDC, 2016^b; Kaiser, 2014; Kaiser, 2005; Farr et al, 2011; Hayes et al, 2011; Ko et al, 2012; NIMH, 2016; Farr et al, 2010; Lee, Casanueva, & Martin, 2005). Thus, our results may suggest that preference for reproductive health providers in primary/mental health care could be concentrated among certain groups of women, such as minority, poor and young women, rather than among all women. On the other hand, results may also suggest that these groups of women experience limited access to different types of health providers and reproductive health are simply the default preference. Regardless, it appears that minority and low income women may not be getting their needs met from their desired healthcare providers. Collectively, these findings add new insight into disparities in women's access to patient-centered care and may ultimately help inform strategies to help reduce healthcare inequities for women in the U.S.

Another notable social determinant of women's preferences for reproductive health specialist-provided primary/mental health care was religious affiliation. It is not clear from these data why religiously-affiliated women would prefer reproductive health specialists for their routine, urgent care, chronic disease, and mental health issues at higher rates than non-affiliated women. Frequency of religious service participation, which is often considered a more precise indicator of religiosity, was not related to preferences for care as we would have hypothesized based upon our previous work on reproductive health service utilization (Hall et al, 2012). Given the consistency and magnitude of our findings across the various types of care, clearly additional research is needed to explore the role of religion in shaping women's preferences for health providers in their physical, mental and reproductive health needs and for informing holistic, patient-centered models of care.

Several limitations of our study are noteworthy. Survey items assessed reproductive health providers generally and did not distinguish between family planning clinics and obstetrics/gynecology practices, nor did we include items assessing concurrent receipt of services from both reproductive health specialists and primary/mental health care providers. Although we applied sampling weights to bring our sample in line with national demographic benchmarks, women in our study were older, more educated, privately insured, of higher income, and more frequent health care users than the general U.S. population. Thus, our findings are not generalizable to all U.S. women and, in fact, may underestimate the experiences and preferences of vulnerable groups of women. Additionally, it is noteworthy that these data were collected in September 2013, just as the Affordable Care Act was being implemented, and so the implications of our findings for changing trends in healthcare delivery, including state-level variation in Medicaid coverage, are unclear. While our low response rate was consistent with other internet-based population health surveys, it was not ideal. Recall bias may also have impacted our estimates of healthcare utilization over the past five years. Because we were interested in a range of types of primary/mental health care services, we had numerous outcomes of interest and thus from a statistical standpoint, multiple comparisons may have been an issue, although adjusted model results were consistent with those reported. Additionally, wide confidence intervals in some cases reflect small sub-sample sizes for some outcomes and ultimately imprecise estimates, which should be interpreted with caution. Finally, while we thoroughly assessed women's past health histories and health service utilization patterns for specific conditions, our estimates for source of care preference are based on all women in our sample, regardless of whether or not they had relevant medical conditions. Thus, the meaning of women's preferred sources for specific types of services which they may not need are not fully clear from these data.

Implications for Practice and Policy

Reproductive health settings offer a unique opportunity to more comprehensively address the healthcare needs of many American women, especially socially disadvantaged populations. Obstetrician/gynecologist practices and family planning clinics often have the capacity for integrated models of care, including multidisciplinary staff who are well-versed in task sharing (CDC, 2016^a; Kaiser, 2014; Farr et al, 2010; Lee, Casanueva, & Martin, 2005; Hall et al, 2015^b). However, efforts to address the general and mental health needs of reproductive-aged women in reproductive health contexts have been sparse, and it is not clear whether reproductive health specialists are interested in expanding services. In national surveys and interviews with obstetricians/gynecologists, the most commonly reported barriers to provision of mental health and chronic disease management include limited training/experience in diagnosis and treatment, inadequate time for counseling and follow-up, lack of case managers or ancillary staff, lack of resources/time to maintain provider training, limited knowledge of consultation/referral options, and service implementation and maintenance costs (Yonkers & Chantilis, 1995; Scholle & Kelleher 2003; Schmidt et al, 1997; LaRocca et al, 2003).

Research is needed to identify effective strategies to address these barriers in order to serve women's primary and mental health care needs within reproductive health settings. Although not yet widely implemented in contexts beyond pregnancy, recent clinical and

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Table 1

Sociodemographic, Reproductive, and Health Characteristics of the Sample

	n	%
Total	981	100
<i>Sociodemographics</i>		
Age group		
18–24 years	104	15
25–34 years	223	27
35–44 years	271	26
45–55 years	383	32
Educational attainment		
<High School	65	9
High School	285	26
Some college	283	32
Bachelor's	348	33
Race/ethnicity		
White, non-Hisp	692	61
Black, non-Hisp	96	14
Other, non-Hisp	78	9
Hispanic	115	17
Income		
<\$25,000	165	17
\$25–49,999	214	22
\$50–74,999	183	19
\$75,000	419	43
Marital status		
Married	568	54
Previously married	95	9
Never married	219	26
Cohabiting	99	11
Residence		
Metro (urban)	828	86
Non-Metro (sub-urban/rural)	153	14
Employment status		
Employed	634	63
Not employed	347	37
Religious affiliation		
Yes	805	80
No	176	20
Religious service attendance		
Weekly	293	29
< Weekly	481	49

	n	%
Total	981	100
Never	207	22
Type of insurance		
Private	636	64
Medicaid/Medicare	116	12
Other	76	9
None	135	15
Reproductive and Health History		
Sexual intercourse experience (ever)		
Yes	857	89
No	124	11
Pregnancy (ever) ^a		
Yes	649	62
No	317	38
Childbirth (ever) ^a		
Yes	608	57
No	362	43
Prescription contraception (ever) ^a		
Yes	691	73
No	253	27
Prescription contraception (last year) ^a		
Yes	232	27
No	712	73
Perceived health		
Very good to excellent health	492	49
<Very good health	489	51
Chronic disease history		
Yes	663	65
No	318	35
Mental health history		
Yes	276	27
No	705	73
Any current depression symptoms ^b		
Yes	600	65
No	381	35
Any current stress symptoms ^c		
Yes	393	41
No	587	59

Results presented as frequencies and weighted percentages. Totals may not add to 100% due to weighted proportions, rounding and less than 0.5% missing across some items.

^aReproductive history characteristics among women who reported sexual intercourse experience.

^b Current depression symptoms assessed with the Patient Health Questionnaire and

^c current stress symptoms assessed with the Perceived Stress Scale, measured as with any report of one or more symptoms experienced “sometimes” over the last month.

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Table 2

Health Service Characteristics of the Sample

	n	%
Total	981	100
<i>Health Service Utilization</i>		
Frequency of health service use past 5 years		
Every 3 months	179	20
Once every 4–9 months	295	29
About once a year	377	36
About once every 2 years	56	7
About once every 3 years	29	4
About once every 4–5 years	45	5
Type of setting health services received most often past 5 years		
Private practice/HMO/employer-based	776	75
Community/public health clinic	66	7
Hospital-based clinic	45	6
School/college-based health center	14	2
Emergency department	24	3
Urgent care/walk-in clinic	53	7
Other	3	1
Received any reproductive health-specific services in past 5 years ^d		
Yes	841	85
No	139	15
Received any primary care and/or mental health services in past 5 years		
Yes	894	88
No	87	12
<i>Types of Primary Care and Mental Health Care Services Received in Past 5 Years</i>		
Routine medical check-up		
Yes	781	78
No	195	22
Urgent or acute care		
Yes	482	48
No	495	52
Chronic disease/ongoing medical problem		
Yes	274	27
No	698	73
Depression/anxiety		
Yes	216	21
No	754	79
Stress		
Yes	163	16
No	805	84

	n	%
Total	981	100
Intimate partner violence		
Yes	11	2
No	962	98

Results presented as frequencies and weighted percentages. Totals may not add to 100% due to weighted proportions, rounding and less than 0.5% missing across some items.

^aReproductive health specific services includes pap/pelvic exam, contraception, breast, pregnancy, or sexually transmitted infection services.

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Table 3

Women's Preferred and Usual Sources of Primary and Mental Health Care

<i>Preferred Sources of Care Among All Women (N=981)</i>						
	RH Providers %	Generalists %	Others %			
^a All Care Needs (n=949)	22	74	4			
Routine Medical Check-up (n=944)	15	81	4			
Urgent/Acute Care (n=911)	8	86	7			
Chronic Disease (n=821)	9	82	9			
Depression/Anxiety (n=720)	7	44	49			
Stress (n=737)	7	50	44			
Intimate Partner Violence (n=455)	20	32	49			
<i>Usual Sources of Care Among Women Who Reported Primary Care and/or Mental Health Care Service Use (N=894)</i>						
	RH Providers %	Generalists %	Others %			
Routine Medical Check-up (n=770)	14	82	4			
Urgent/Acute Care (n=490)	3	54	42			
Chronic Disease (n=271)	6	70	34			
Depression/Anxiety (n=211)	6	44	50			
Stress (n=158)	11	49	41			
Intimate Partner Violence (n=10)	3	26	71			
<i>Proportion Agreement Between Preferred versus Usual Sources Among Women Who Reported Using primary care/mental health care Services (N=894)</i>						
	Reproductive Health Providers	Generalists %	Others %	% Agreement Between Preferred & Usual Source	Expected Agreement %	P-value
Routine Medical Check-up (n=754)	57	91	23	84	71	<0.001
Urgent/Acute Care (n=478)	31	95	10	60	54	<0.001

Preferred Sources of Care Among All Women (N=981)

	RH Providers %	Generalists %	Others %			
Chronic Disease (n=266)	43	91	40	79	60	0.47 <0.001
Depression/Anxiety (n=205)	66	66	80	71	43	0.50 <0.001
Stress (n=153)	29	72	77	73	43	0.53 <0.001
Intimate Partner Violence (n=10) ^b	-	42	56	-	-	-

RH = reproductive health. Results are presented as weighted proportions (%) of preferred sources of care (all women n=981) and usual sources of care (among those who had used primary care/mental health care services n=894) and of agreement between preferred and usual sources (among women who used services n=894). P-values from Pearson's Chi-Square comparing preferred versus usual sources among women who reported using each type of service. Kappa statistics compared overall % agreement and % expected agreement.

^aWomen were asked a summary comprehensive care item regarding their preferences for "all healthcare needs, if they could get them taken care of in one place."

^bInsufficient sub-sample cell sizes in IPV care for bivariate analysis.

Table 4
 Factors Associated with the Odds of Preferring Reproductive Health Providers Versus Other Sources for Primary and Mental Health Care

N=981	All Care Needs aOR (95%CI)	Routine Medical Checkup aOR (95%CI)	Urgent/Acute Care aOR (95%CI)	Chronic Disease aOR (95%CI)	Depression/ Anxiety aOR (95%CI)	Stress aOR (95%CI)	Intimate Partner Violence aOR (95%CI)
Age group							
18–24 years	1	1	1	1	1	1	1
25–34 years	.60(.24,1.43)	1.01(.38,2.68)	.74(.18,2.97)	.75(.20,2.76)	5.21(.45,60.07)	5.21(.35,78.14)	3.54(1.16,10.83)
35–44 years	.86(.35,2.11)	1.61(.59,4.39)	1.27(.31,5.17)	1.27(.35,4.65)	5.20(.42,64.41)	4.86(.29,81.46)	4.17(1.31,13.30)
45–55 years	1.03(.41,2.57)	1.55(.55,4.34)	.83(.17,3.92)	.92(.22,3.83)	6.20(.47,81.43)	6.45(.36,115.12)	4.69(1.44,15.29)
Educational attainment							
<High School	1	1	1	1	1	1	1
High School	.88(.36,2.19)	1.11(.44,2.83)	.47(.15,1.44)	.37(.14,1.03)	.96(.22,4.26)	.65(.11,3.73)	.79(.23,2.69)
Some college	.55(.22,1.40)	.72(.28,1.89)	.38(.11,1.31)	.43(.16,1.20)	.91(.21,3.85)	1.08(.17,6.75)	.88(.27,2.92)
Bachelor's	.74(.28,1.98)	.63(.21,1.88)	.34(.09,1.27)	.48(.14,1.63)	.53(.10,2.77)	.88(.12,6.52)	.99(.26,3.73)
Race/ethnicity							
White, non-Hisp	1	1	1	1	1	1	1
Black, non-Hisp	2.66(1.41,5.02)	1.28(.65,2.49)	2.61(1.07,6.37)	1.97(.83,4.71)	.81(.20,3.20)	.50(.09,2.65)	.55(.15,2.07)
Other, non-Hisp	1.70(.73,3.95)	2.23(.94,5.32)	1.22(.33,4.55)	2.07(.56,7.63)	.12(.02,.74)	2.16(.88,5.29)	.89(.34,2.30)
Hispanic	1.64(.90,2.98)	1.00(.51,1.98)	1.27(.50,3.26)	2.01(.88,4.64)	1.68(.67,4.17)	.64(.19,2.13)	.54(.22,1.34)
Income							
<\$25,000	1	1	1	1	1	1	1
\$25–49,999	.69(.33,1.39)	.48(.23,.99)	.75 (.29,1.98)	.46(.17,1.23)	.49(.13,1.81)	.48(.13,1.81)	.89(.31,2.54)
\$50–74,999	.55(.25,1.19)	.31(.14,.67)	.31(.11,.89)	.16(.05,.50)	.49(.14,1.75)	.33(.09,1.25)	.78(.26,2.33)
\$75,000	.88(.41,1.91)	.35(.16,.77)	.53(.19,1.47)	.29(.09,.88)	1.03(.24,4.51)	.33(.08,1.42)	.72(.27,1.94)
Marital status							
Married	1	1	1	1	1	1	1
Previously married	1.13(.57,2.26)	.88(.43,1.80)	.69(.25,1.99)	1.73(.72,4.16)	.78(.23,2.62)	.63(.19,2.13)	.86(.28,2.67)
Never married	.93(.48,1.81)	.75(.36,1.58)	.67(.22,4.43)	.64(.20,2.05)	.38(.13,1.09)	.96(.31,2.98)	1.02(.46,2.26)
Cohabiting	.93(.38,2.30)	.90(.37,2.17)	1.39(.44,4.43)	.93(.26,3.30)	1.25(.39,4.03)	.82(.15,4.50)	.76(.26,2.20)
Residence							
Metro (urban)	.86(.49,1.51)	.68(.40,1.25)	.75(.31,1.78)	1.43(.55,3.67)	.98(.40,2.41)	.54(.23,1.26)	.55(.25,1.22)

N=981	All Care Needs aOR (95%CI)	Routine Medical Checkup aOR (95%CI)	Urgent/Acute Care aOR (95%CI)	Chronic Disease aOR (95%CI)	Depression/ Anxiety aOR (95%CI)	Stress aOR (95%CI)	Intimate Partner Violence aOR (95%CI)
Non-Metro (sub-urban/rural)	1	1	1	1	1	1	1
Employment status							
Employed	1.03(.62,1.72)	1.93(1.14,3.27)	1.89(.97,3.69)	1.81(.88,3.74)	1.20(.47,3.09)	1.46(.58,3.67)	1.20(.65,2.21)
Not employed	1	1	1	1	1	1	1
Religious affiliation							
Yes	2.00(1.03,3.69)	3.41(1.59,7.31)	2.67(1.00,7.11)	2.46(.90,6.70)	2.30(1.01,5.26)	7.59(1.72,33.30)	1.81(.89,3.65)
No	1	1	1	1	1	1	1
Religious service attendance							
Weekly	1	1	1	1	1	1	1
< Weekly	.72(.45,1.13)	.78(.46,1.31)	.48(.23,1.02)	.56(.26,1.18)	1.65(.77,3.54)	1.27(.63,2.62)	1.36(.70,2.64)
Never	.87(.45,1.65)	.81(.40,1.61)	.31(.11,.86)	.62(.21,1.81)	2.68(1.13,6.34)	1.86(.68,5.07)	1.49(.62,3.59)
Type of insurance							
Private	1	1	1	1	1	1	1
Medicaid/Medicare	.39(.17,.91)	.46(.20,1.07)	.17(.04,.69)	.32(.07,1.31)	.18(.03,.95)	.09(.01,.92)	1.02(.31,3.35)
Other	.44(.18,1.05)	.49(.18,1.35)	.49(.11,2.14)	1.20(.40,3.56)	.13(.02,1.34)	.29(.04,1.50)	2.28(.74,7.00)
None	.69(.34,1.41)	.89(.45,1.76)	1.02(.43,2.41)	.74(.26,2.13)	1.11(.36,3.48)	.48(.15,1.54)	1.41(.56,3.59)
Pregnancy (ever) ^d							
Yes	.97(.57,1.67)	.86(.48,1.55)	1.27(.59,2.74)	1.47(.61,3.57)	.99(.37,2.61)	1.56(.57,4.31)	.81(.39,1.67)
No	1	1	1	1	1	1	1
Prescription contraception (ever) ^d							
Yes	1.12(.67,1.91)	.88(.50,1.56)	.63(.31,1.29)	.63(.29,1.35)	.92(.37,2.32)	1.40(.55,3.53)	.95(.44,2.04)
No	1	1	1	1	1	1	1
Prescription contraception (last year) ^d							
Yes	2.58(1.44,4.61)	2.77(1.46,5.25)	3.30(1.32,8.24)	2.41(1.01,5.75)	2.96(1.10,7.99)	2.37(.83,6.77)	2.11(1.02,4.36)
No	1	1	1	1	1	1	1
Perceived Health							
Very good-excellent	1.10(.71,1.73)	1.17(.71,1.92)	.83(.43,1.62)	.80(.42,1.51)	.97(.43,2.15)	2.06(.81,5.19)	1.25(.68,2.31)

N=981	All Care Needs aOR (95%CI)	Routine Medical Checkup aOR (95%CI)	Urgent/Acute Care aOR (95%CI)	Chronic Disease aOR (95%CI)	Depression/ Anxiety aOR (95%CI)	Stress aOR (95%CI)	Intimate Partner Violence aOR (95%CI)
<Very good health	1	1	1	1	1	1	1
Chronic disease history							
Yes	.52(.34,.81)	.70(.44,1.11)	.34(.18,.64)	.42(.23,.77)	.89(.38,2.06)	.78(.34,1.80)	.61(.32,1.16)
No	1	1	1	1	1	1	1
Mental health history							
Yes	1.05(.63,1.75)	1.02(.58,1.82)	1.43(.70,2.93)	.93(.43,2.03)	1.18(.54,2.59)	1.20(.50,2.92)	1.64(.82,3.29)
No	1	1	1	1	1	1	1
Depression symptoms ^b							
Yes	1.31(.80,2.14)	1.50(.89,2.54)	1.59(.76,3.32)	1.77(.79,3.98)	1.51(.67,3.38)	2.16(.25,1.63)	1.89(.88,4.05)
No	1	1	1	1	1	1	1
Stress Symptoms ^b							
Yes	.87(.80,2.15)	.59(.34,1.02)	.73(.36,1.47)	.57(.28,1.16)	.59(.26,1.34)	.64(.91,5.15)	1.03(.53,2.02)
No	1	1	1	1	1	1	1

N=all women 981. Results are presented as adjusted odds ratios (aOR) and 95% confidence intervals (CI) from multiple logistic regression models of factors associated with preference for reproductive health specialist-provided primary and mental health care, by different types of services, versus other sources of care.

^aReproductive history characteristics among women who reported sexual intercourse experience.

^bCurrent depression symptoms assessed with the Patient Health Questionnaire.

^cCurrent stress symptoms assessed with the Perceived Stress Scale.

* Bolded indicates significance with p-value <0.05.