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SOCIAL CONSEQUENCES

Correlates of perceived and internalized stigma among abortion patients in the USA: An exploration by race and Hispanic ethnicity

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ABSTRACT

This study estimated the proportion of abortion patients in the USA reporting perceived and internalized stigma, and assessed associations between those outcomes and women's sociodemographic, reproductive, and situational characteristics by race/ethnicity from a nationally representative dataset. Two-thirds of women reported that some people would look down on them if they knew about the abortion, and more than half of the respondents reported needing to keep their abortion a secret from friends and family. Associations between women's characteristics and abortion stigma varied by race/ethnicity. Results indicate that many abortion patients in the USA perceive and internalize stigma; certain subgroups of women are more likely to perceive or internalize stigma than others.

1. Introduction

It is estimated that at least one-third of women in the USA will have an abortion in their reproductive lifetime [1]. Despite this frequency, stigmatization of abortion, and the women who have them, proliferates. Researchers, advocates, medical professionals, and lay persons alike acknowledge the stigma of abortion and its potentially negative impact on women's health and well-being, yet there is limited understanding of the issue from the perspective of abortion patients. In 2008, the American Psychological Association (APA) released a report on abortion and mental health in the USA that identified several factors that may be predictive of psychological responses after an abortion – two of them were perceived stigma and need for secrecy about the abortion [2]. The APA report details numerous ways in which stigma can negatively affect a woman's social, psychological, and biological functioning. Research shows that stigma, regardless of the issue being stigmatized, can influence an individual's disclosure decisions and behaviors; create conflict in relationships with family, friends, and romantic partners; and impact a person's physical and mental health, as well as his or her overall well-being [3–6]. The APA report also details how internalized stigma – the process of internalizing other people's negative attitudes about abortion into beliefs about oneself – can be particularly harmful to women's well-being. The process of internalizing or coping with a stigma (often done through secrecy) has been shown to directly impact a person's self-perception, self-esteem, and health outcomes [7,8], as well as lead to self-doubt and depression [6,9,10].

Despite knowledge that stigma has the potential to negatively impact a woman's life in a variety of ways, it has not been well studied in the USA. In 1999, Major and Gramzow [11] found that 47% of all women believed that they would be looked down on if people knew about their abortion, and that 45% of women felt as though they needed to keep the abortion a secret from family and friends. The authors found that although concealing abortion from others may provide a number of benefits, such as preserving a woman's interpersonal relationships and social networks, the process of keeping a secret can create a cycle of thought intrusion and suppression that can lead to psychological distress over time.

In 2003, Ellison [12] conducted a small mixed-methods study and found that all focus group participants and in-depth interview participants (n = 4) reported feeling stigmatized by their abortion and that for this reason, they did not tell their parents or families about their decision. Additionally, the women cited "fear of social judgment" and "being labeled as selfish" as directly influencing their decision to conceal their abortion. Most recently, Littman et al. [13] conducted a pilot study of a stigma intervention program among abortion patients and also found that all of the participants (n = 22) believed that the judgment and negative attitudes of other people were hurtful to women who have abortions.

Up-to-date, nationally representative statistics on abortion stigma will contribute to the literature on the topic, and provide evidence regarding the impact of stigma on women's lives. The present study was conducted to measure abortion stigma using a 3-domain framework. The first domain, perceived stigma, refers to an individual's perception of whether they will be looked down on, thought of differently, or treated negatively by other people for having an abortion. The second, experienced stigma, includes overt experiences of stigmatization, such as rejection by a spouse, family member, and friends; physical, verbal, or emotional abuse; being

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devalued as a wife or mother; and being mistreated in the home, community, or healthcare setting. The third domain, internalized stigma, involves the internalization of other people's negative attitudes or beliefs about abortion and the women who have them. Internalized stigma often manifests itself as feelings of secrecy, guilt, shame, anxiety, or concern about other people's beliefs or opinions about abortion.

The purpose of the study was to estimate the proportion of abortion patients reporting perceived and internalized stigma, and to measure the associations between these outcomes of interest and women's sociodemographic, reproductive, and situational characteristics. The initial exploratory analyses of the data revealed that race/ethnicity was the strongest and most consistent predictor of perceived and internalized stigma, and that race/ethnicity was functioning as an effect modifier on the relationships between several independent and dependent variables. On the basis of these results (not shown here), the results are presented stratified by race and Hispanic ethnicity. Also, because data were collected on the day the participants were undergoing an abortion, the study did not explore experienced stigma, but focused on the perceived and internalized domains.

2. Materials and methods

2.1. Data

The data for this study come from the Guttmacher Institute's 2008 Abortion Patient Survey (APS). The APS is a cross-sectional survey that collects data from a large sample of abortion patients in the USA to obtain information about their sociodemographic and reproductive health characteristics. The procedures used in selecting the sample have been described in detail elsewhere [14]. In brief, abortion patients were approached by staff in participating abortion facilities and asked to fill out a self-administered pencil and paper questionnaire that was available in English and Spanish.

The 95 participating facilities (10 hospitals and 85 nonhospital facilities) reported performing 12 866 abortions during the sampling period (April 2008 to May 2009). Valid questionnaires were obtained from 9493 patients, resulting in a response rate of 74%. Facility staff supplied information about age, race/ethnicity, and insurance coverage for 1082 of the 3293 women who declined to participate. This was done to assess whether this group differed significantly from survey participants. No information was available for the remaining 2211 women who also declined. To correct for any bias produced by deviation from the original sampling plan and survey nonresponse, a 3-stage weighting process was applied (see Jones et al. [14] for details).

The 2008 APS questionnaire had two modules: Module A and Module B. Module B included the survey items measuring perceived and internalized stigma. The analyses in the present study used data from approximately one-half of the full sample who successfully completed Module B (4613 women). The 425 women (9% of the Module B sample) who reported their racial background as non-Hispanic Asian, South Asian, Native Hawaiian, Pacific Islander, or Native American were excluded from the analyses. Individually, these racial/ethnic groups had cell sizes too small for inclusion in the analyses, and a collapsed "other" category does not accurately represent this group of women. Ultimately, the final sample size was 4188.

2.2. Outcome measures

The study included 5 items intended to measure perceived and internalized stigma. All items were measured on a 4-point Likert scale with responses ranging from "strongly agree" to "strongly disagree"; women could also mark "not applicable". For analytical purposes, "not applicable" responses were treated as missing data and the remaining 4 categories were dichotomized into "agree" and "disagree".

To measure perceived stigma, women were asked to respond to the following 3 statements: (1) "I would be looked down on by some people if they knew I'd had this abortion"; (2) "My friends and family would think less of me if they knew about this abortion"; and (3) "My regular health care provider(s) would treat me differently if they knew I'd had this abortion". These items were adapted from the 1999 study of Major and Gramzow [11] on abortion as stigma.

Responses to the following statements were used as proxy measures for internalized stigma: "I need to keep this abortion a secret from my close friends and family" (adapted from work done by Major and Gramzow [11]) and "What other people think or feel about my decision to have an abortion doesn't matter to me".

The independent variables of interest in this study were women's sociodemographic, reproductive, and situational characteristics. The sociodemographic variables included were age, race/ethnicity, union status, educational attainment, poverty status, religious affiliation, immigrant status (ascertained from the proxy of birth in the USA), insurance status at the time of the abortion, and region of residence. The reproductive health variables of interest were parity, number of previous abortions, gestational age of pregnancy, self-induction (i.e. whether a woman attempted to induce an abortion herself before seeking services at a provider), and use of emergency contraception to try to prevent the current pregnancy. Three situational characteristics also contextualized the woman's life at the time of the abortion. The first determined whether a woman had already decided to have the abortion when she scheduled her appointment. The second was whether a woman wanted to have a(nother) child in the future. Lastly, women were asked how supportive the man involved in the pregnancy was of her decision to have an abortion.

2.3. Statistical analyses

Univariate statistics were calculated to provide the prevalence of perceived and internalized stigma. The Pearson χ^2 test was used to test for significant differences in women's personal characteristics and the outcomes of interest by race and ethnicity.

Stratified multivariate logistic regression analysis was conducted by race/ethnicity to assess the relationship between independent and dependent variables while controlling for other variables in the model. Given the descriptive nature of this research, all independent variables were used in the analysis regardless of whether or not they were found to be significantly associated with the outcome variable at the bivariate level.

All analyses were conducted with Stata 10.0 (StataCorp, College Station, TX, USA). Design-based analyses were performed to account for the complex sampling design of the survey, to correct for the intracluster correlation (ICC) at the clinic level from multiple women at the same clinic completing the survey, and to produce accurate variance estimates. This study and all associated procedures and study instruments were approved by an independent Institutional Review Board convened by the Guttmacher Institute.

3. Results

Table 1 provides the sociodemographic, reproductive health, and situational characteristics of the women in the sample by race and Hispanic ethnicity. Table 2 shows results for the distribution and differences between groups of the 5 outcome measures.

Two-thirds of women (66%) either agreed or strongly agreed that other people would look down on them if they knew about the abortion. Specific to friends and family, 40% of women reported

Table 1
Characteristics of the study population by race and Hispanic ethnicity [a,b]

	Non-Hispanic black women (n=1412)	Non-Hispanic white women (n=1721)	Hispanic women (n=1055)	Total (n=4188)
Percentage distribution	33	40	27	100
Sociodemographic variables				
Age, y				
<20	19	16	18	18
20–24	34	35	35	34
25–29	26	23	26	25
30–34	13	14	12	13
35+	8	11	11	11
Union status [d]				
Never married	57	42	39	46
Married	8	14	17	13
Cohabiting, not married	28	30	31	30
Previously married	7	13	13	11
Educational attainment [d]				
< High school	17	13	26	18
High school graduate or GED	33	27	28	30
Some college or AA	36	40	35	37
College graduate or more	14	19	11	15
Federal Poverty Level [d]				
<100% 2008 FPL	50	32	52	43
100–199% FPL	25	28	25	26
>200% FPL	25	41	23	32
Religious affiliation [d]				
None	24	34	22	27
Protestant	64	35	14	39
Catholic	6	25	60	28
Other	6	7	4	6
Health insurance status [d]				
Medicaid	41	22	36	32
Private insurance	28	37	21	30
Other insurance	5	4	4	4
Uninsured	25	38	39	34
Born in USA [d]				
Yes	92	96	69	88
No	8	4	31	12
Region of residence [d]				
Northeast	30	20	22	24
Midwest	16	25	6	17
South	47	35	35	39
West	7	20	36	20
Reproductive health variables				
Parity [d]				
0	29	49	35	39
1–2	54	42	45	47
3+	17	10	20	15
Previous abortions [d]				
0	42	59	47	50
1	29	26	31	28
2+	29	15	23	22
Gestational age, wk [c]				
<12	81	87	85	85
12–18	17	11	14	14
>18	2	1	2	2
Tried self-induction [c]				
Yes	1	2	3	2
No	99	98	97	98
Used emergency contraception [d]				
Yes	3	4	9	5
No	97	96	91	95
Situational variables				
Mind made up [e]				
Yes	92	92	91	92
No	8	8	9	8
Wants pregnancy in future [c,f]				
No	47	42	41	43
Yes	41	40	44	42
Not sure, didn't care	12	17	15	15
Partner support for abortion [d]				
Supportive	64	72	64	68
Man doesn't know	13	14	20	15
Unsupportive	11	5	7	8
Neither, unsure	12	9	10	10

that their friends and family would think less of them if they knew they had terminated their pregnancy. Less than one-fifth of women (17%) believed their regular healthcare provider would treat them differently if they knew about the abortion. More than half of the respondents (58%) reported needing to keep their abortion a secret from their close friends and family. A third of women (33%) reported that what other people think or feel about their decision to have an abortion matters to them.

There were significant differences in the outcomes of interest by racial and ethnic group (Table 2). Black women were the least likely to report perceiving stigma for any of the 3 measures, while white women were the most likely to perceive stigma from the general public. Hispanic women were the most likely to perceive stigma from their friends and family, and both white and Hispanic women were the most likely to perceive stigma from their regular healthcare provider. Needing to keep the abortion a secret from close friends and family was most common for Hispanic women, and caring about other people's opinion about abortion was the least common among black women.

In the stratified, multivariate analyses, numerous sociodemographic, reproductive, and situational variables were found to be independently associated with perceived and internalized stigma (Tables 3 and 4). Black women had higher odds of perceiving stigma from other people if they lived in the southern or western regions of the USA (odds ratio [OR] 1.65 and 1.90, respectively) and if the man involved in the pregnancy did not know about the abortion (OR 1.49), as well as if they had an unsupportive partner (OR 1.76). When focusing on stigma just from friends and family, several other characteristics emerged as significant predictors of perceived stigma. Foreign-born black women were more likely to perceive stigma from friends and family (OR 2.32), while having had 2 or more previous abortions decreased the odds of perceived stigma (OR 0.57). Perceived stigma from healthcare providers had a somewhat different set of predictors. Relative to adolescents, most groups of adult women were more likely to perceive stigma from this source (OR 1.99 for women aged 20–24 years; OR 2.71 for women aged 25–29 years; and OR 2.39 for women aged 30–34 years). Other characteristics positively associated with perceived stigma from providers were having attempted self-induction (OR 3.12) and having used emergency contraception (OR 2.83).

Perhaps not surprisingly, predictors of internalized stigma were similar to predictors of perceived stigma. Foreign-born black women had increased odds of keeping the abortion a secret (OR 2.22), while women who had had 2 or more previous abortions were less likely to report needing to keep the abortion a secret from friends and family (OR 0.60). Black women at the higher end of the income spectrum (>200% of federal poverty level), women who had not made a decision about abortion at the time of making the appointment, and women who had not told their partner about the abortion all had increased odds of caring about other people's opinions about their abortion decision (ORs 1.49, 1.81, and 1.64, respectively).

Among white women, those who identified as Protestant were more likely to perceive stigma (OR 1.41 for others and OR 1.54 for friends and family) and more likely to report needing to keep the

Table 1 (continued)

[a] Column percentages may add up to slightly more or less than 100 because of rounding.
[b] Sample sizes are unweighted but percentages are weighted.
[c] Significant at $P < 0.01$.
[d] Significant at $P < 0.001$.
[e] Item: When you made this appointment, had you already made up your mind to have an abortion?
[f] Item: Right before becoming pregnant, did you want to have a(nother) baby at any time in the future?

Table 2
Percent of abortion patients reporting perceived and internalized stigma by race and Hispanic ethnicity

	Total	Non-Hispanic blacks	Non-Hispanic whites	Hispanics
Perceived stigma				
I would be looked down on by some people if they knew I'd had this abortion (n = 3791)[a]	66	52	75	67
My friends and family would think less of me if they knew about this abortion (n = 3818)[a]	40	27	44	50
My regular healthcare provider(s) would treat me differently if they knew I'd had this abortion (n = 3211)[a]	17	11	20	20
Internalized stigma				
I need to keep this abortion a secret from my close friends and family (n = 3893)[a]	58	47	58	69
What other people think or feel about my decision to have an abortion doesn't matter to me (n = 3791)[a]	67	73	65	61

[a] Significant at $P < 0.001$.

abortion a secret (OR 1.50). Not having decided about the abortion before making the appointment also increased women's odds of perceived stigma (from others OR 2.78 and from regular healthcare providers OR 1.85) and of caring about others' opinions (OR 2.75). Women whose partners did not know about the abortion had an elevated likelihood of perceiving stigma from other people (OR 1.75) and from friends and family (OR 1.57); this factor also was positively associated with needing to keep the abortion a secret (OR 1.50) and caring about others' opinions about abortion (OR 1.50). White women who had had 2 or more previous abortions were less likely than women who had never had an abortion to perceive stigma from their friends and family (OR 0.70), and women who had a gestation of 12–18 weeks or who wanted a pregnancy in the future were less likely to report needing to keep the abortion a secret from people close to them (ORs 0.61 and 0.78, respectively).

Hispanic women had increased odds of perceiving stigma from others or from friends and family if they were Catholic (OR 1.48), were foreign born (OR 1.83), had private health insurance (OR 2.47), and lived in the southern and western regions of the USA (ORs 1.59 and 1.67, respectively). Living in the midwestern, southern, and western regions was associated with increased odds of perceived stigma from healthcare providers (ORs 2.74, 3.02, and 1.86, respectively). Not telling the man involved with the pregnancy about the abortion was positively associated with all 3 perceived stigma measures (ORs 2.04, 2.10, and 1.84, respectively). Compared with their counterparts who had not had any previous abortions, Hispanic women who had had 1 or more previous abortions were less likely to perceive stigma from others (ORs 0.58 and 0.46, respectively) and from friends and family (OR 0.70 for 2 or more previous abortions). With regard to internalized stigma, more variables were found to be associated with internalized stigma among Hispanic women than among those who were black, white, or of other race/ethnicity. Hispanic women who had some college education (OR 1.72), were Catholic (OR 1.60), were foreign born (OR 2.41), lived in the southern or western regions (ORs 2.02 and 1.61), and had not told their partner about the abortion (OR 2.18) had increased odds of needing to keep the abortion a secret from close friends and family. Meanwhile, women who were cohabiting (OR 0.65) and living at 100%–199% of the federal poverty level (OR 0.64) had decreased odds of needing to do so. Hispanic women who had attended some college (OR 1.53), had not made a decision about the abortion at the time of making the appointment (OR 3.40), or wanted a(nother) child in the future (OR 1.45) had increased odds of caring about other people's opinion of their abortion decision.

4. Discussion

4.1. Key findings

For years, abortion providers and reproductive rights advocates have talked about the stigma associated with abortion and how it silences women from talking about their abortion experiences. The present study provides the first national estimates of the proportion of abortion patients who perceive and internalize stigma, and identifies which personal characteristics are associated with these outcomes of interest.

The findings indicate that regardless of race or ethnicity, abortion stigma is an issue for a sizable proportion of women choosing to terminate a pregnancy. The findings that more than half of women seeking an abortion feel a need to keep it a secret from close friends and family, and that a third of women are concerned about what other people think about their decision to have an abortion are particularly concerning. According to other studies, concealment of a stigma can negatively impact a person's physical and mental health [11,15,16]. Feelings of guilt and shame may ultimately lead to high stress levels as people deal with the constant threat that someone may discover their secret [17].

Of course it must be acknowledged that simply perceiving abortion to be stigmatized does not mean that a woman will need to keep the abortion a secret from people close to her or that the perception will somehow negatively impact her life. The exact reasons why 58% of the sample reported needing to keep their abortion a secret are unknown. However, among women in the study who reported that other people would look down on them for having an abortion, 73% also reported needing to keep the abortion a secret from close friends and family, and 41% cared about what other people thought about their decision (results not shown). Among women who thought their friends or family would think less of them for having an abortion, 90% needed to keep the abortion a secret and 48% reported that other people's opinion mattered to them (results not shown). The high proportion of abortion patients reporting perceived and internalized stigma highlights the importance of understanding the potential impact of stigma on the health and well-being of the approximately 1.2 million women in the USA who every year make the decision to terminate a pregnancy.

Although each racial/ethnic group had its own unique set of associations for perceived and internalized stigma, the groups shared many of the same predictors. In particular, 4 characteristics were found to consistently predict stigma across these groups: region of residence, number of previous abortions, not having one's mind made up about the abortion at the time of making the appointment, and not informing the man involved with the pregnancy about the abortion. These same 4 variables also demonstrated fairly consistent patterns of association (in terms of magnitude and direction of association) across the different stigma measures, but the results were not always statistically significant. Given the strictly descriptive nature of the study, the reasons for the association between particular characteristics and stigma cannot be ascertained, but we can speculate as to why these relationships may exist.

Women living in the southern, western, and midwestern regions of the country were more likely to perceive stigma than women living in the northeastern region. Abortion access in southern and midwestern regions of the USA is often limited, and antiabortion activities (e.g. picketing of clinics, antiabortion billboards, and harassment of women as they enter clinics) tend to be common

Table 3
Adjusted odds ratios for perceived stigma by race and Hispanic ethnicity [a]

	Stigma from other people [e]			Stigma from friends and family [f]			Stigma from healthcare providers [g]		
	Non-Hispanic blacks (n = 1273)	Non-Hispanic whites (n = 1620)	Hispanic (n = 898)	Non-Hispanic blacks (n = 1301)	Non-Hispanic whites (n = 1592)	Hispanic (n = 925)	Non-Hispanic blacks (n = 1145)	Non-Hispanic whites (n = 1331)	Hispanic (n = 735)
Sociodemographic variables									
Age									
<20 (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20–24	1.38	0.70	0.93	0.98	0.76	0.83	1.99 [b]	0.78	0.84
25–29	1.00	0.88	1.14	0.76	0.69	1.00	2.71 [b]	0.63	1.13
30–34	0.86	0.79	1.07	1.05	0.86	1.00	2.39 [b]	0.74	0.59
35+	1.39	0.69	0.87	0.92	0.94	0.66	2.53	0.76	1.49
Federal Poverty Level									
<100% 2008 FPL (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
100–199% FPL	1.09	0.72 [b]	0.67 [b]	0.87	0.83	0.72	0.81	0.95	0.83
>200% FPL	1.22	0.88	0.91	0.87	0.85	0.89	1.00	1.11	1.18
Religious affiliation									
None (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Protestant	0.88	1.41 [b]	1.14	0.87	1.54 [c]	1.10	1.27	1.39	0.80
Catholic	0.97	0.80	1.41	0.97	1.12	1.48 [c]	1.73	1.22	1.48
Other	0.93	0.77	1.79	1.11	0.82	1.94	1.85	1.28	0.97
Born in USA									
Yes (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No	1.53	0.78	1.22	2.32 [c]	0.82	1.83 [c]	1.78	0.68	1.41
Health insurance status									
Medicaid (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Private insurance	1.01	1.29	2.47 [d]	1.14	1.09	1.23	1.23	0.99	0.69
Other insurance	0.67	1.09	0.74	0.89	0.63	0.98	1.01	0.95	0.43
Uninsured	1.23	1.01	1.40	1.44	0.91	0.97	1.16	1.21	0.81
Region of residence									
Northeast (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Midwest	1.34	1.94 [b]	0.89	0.80	1.24	0.82	0.87	1.23	2.74 [b]
South	1.65 [b]	1.30	1.59 [b]	1.47	1.21	1.68	1.17	1.18	3.02 [d]
West	1.90 [b]	1.23	1.67 [b]	1.59	1.08	1.44	0.46	0.78	1.86 [b]
Reproductive health variables									
Parity									
0 (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1–2	0.86	0.93	0.66	0.83	1.08	0.72	0.44 [d]	1.22	1.10
3+	0.92	0.81	0.77	0.88	0.87	1.03	0.41	1.68	1.37
Previous abortions									
0 (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	0.89	1.00	0.58 [c]	0.79	1.08	0.96	0.79	0.76	0.85
2+	0.73	0.70	0.46 [d]	0.57 [b]	0.70 [b]	0.70 [b]	0.59	1.24	0.82
Tried self-induction									
Yes	1.07	0.62	0.82	1.03	0.98	0.86	3.12 [a]	1.51	1.10
No (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Used emergency contraception									
Yes	1.58	0.94	0.99	1.44	1.10	1.01	2.83 [b]	1.53	0.77
No (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Situational variables									
Mind made up									
Yes (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No	1.59	2.78 [c]	1.83	0.98	1.64	1.69 [b]	1.07	1.85 [b]	1.33
Partner support for abortion									
Supportive (ref.)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Man doesn't know	1.49 [b]	1.75 [c]	2.04 [c]	1.68 [b]	1.57 [d]	2.10 [d]	1.01	1.60	1.84 [b]
Unsupportive	1.76 [b]	0.68	2.11	1.44	0.81	1.13	1.00	1.06	0.35
Neither, unsure	1.43	1.26	1.52	1.35	1.04	1.34	1.76	1.04	1.60

[a] Data adjusted for complex sampling design and intracluster correlation at clinic level.
[b] Significant at $P < 0.05$.
[c] Significant at $P < 0.01$.
[d] Significant at $P < 0.001$.
[e] An odds ratio of greater than 1.00 indicates increased odds of perceiving stigma from other people.
[f] An odds ratio of greater than 1.00 indicates increased odds of perceiving stigma from family and friends.
[g] An odds ratio of greater than 1.00 indicates increased odds of perceiving stigma from regular healthcare provider(s).

in those regions [18]. The South is traditionally a conservative and highly religious (primarily evangelical Christian) area of the USA, and 12 of the country's most "prolife" states are located in this region (these rankings are based on states that have the highest percentages of adults who consider themselves to be prolife when polled) [19]. The Midwest is also a very religious area of the country (primarily Catholic and Protestant); in addition, another 6 of the country's most prolife states are located in this region. Furthermore, 26 out of the 29 states in these 2 regions (including the District of Columbia) do not provide Medicaid funding for abortion which sends the message to women that abortion is not an acceptable medical procedure [20]. It should be noted that in December 2009, a bill was passed by the US Congress to allow the District of Columbia to use Medicaid funds to pay for abortions for low-income women, but at of the time of the survey, the District was not allowed to use local funds for abortion. That women living in the West perceive significantly more stigma than their counterparts in the Northeast is somewhat surprising as the West is often thought of as a very

Table 4
Adjusted odds ratios for internalized stigma by race and Hispanic ethnicity[a]

	Need to keep abortion a secret[b]			Others' opinions matter[c]		
	Non-Hispanic black women (n = 1316)	Non-Hispanic white women (n = 1628)	Hispanic women (n = 949)	Non-Hispanic black women (n = 1305)	Non-Hispanic white women (n = 1591)	Hispanic women (n = 895)
Sociodemographic variables						
Union status						
Never married (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Married	1.19	1.32	0.63	1.17	1.08	1.11
Cohabiting, not married	0.99	1.09	0.65[d]	1.31	0.95	0.96
Previously married	0.74	1.21	0.91	1.37	0.92	1.49
Educational attainment						
< High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
HS graduate/GED	0.79	0.78	1.16	1.28	0.89	1.15
Some college or AA	1.19	0.86	1.72[d]	0.92	0.86	1.53[d]
College graduate or more	1.27	0.88	1.44	1.55	1.17	1.38
Federal Poverty Level						
<100% 2008 FPL (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
100%–199% FPL	0.91	0.82	0.64[d]	1.21	0.99	0.75
>200% FPL	0.87	0.97	0.65	1.49[d]	0.90	0.99
Religious affiliation						
None (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Protestant	0.84	1.50[f]	1.16	1.11	1.20	1.04
Catholic	0.95	1.04	1.60[d]	1.10	1.18	1.14
Other	1.84	0.96	2.07	1.84	1.04	1.14
Born in USA						
Yes (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
No	2.22[f]	1.03	2.41[f]	1.58	0.81	1.18
Health insurance status						
Medicaid (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Private insurance	1.29	1.31	1.85[d]	0.78	1.49[d]	1.01
Other insurance	0.68	1.14	1.21	0.57	1.07	1.09
Uninsured	1.22	1.13	1.00	0.83	1.06	1.07
Region of residence						
Northeast (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Midwest	0.67	0.94	1.15	1.09	1.04	0.78
South	1.33	1.00	2.02[f]	1.27	0.91	1.15
West	0.84	0.78	1.61[e]	1.38	0.99	1.30
Reproductive health variables						
Previous abortions						
0 (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
1	0.87	1.21	0.81	0.84	0.76	1.30
2+	0.60[e]	0.75	0.78	0.70	0.75	0.77
Gestational age, wk						
<12 (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
12–18	0.78	0.61[e]	0.89	1.04	0.91	1.04
>18	1.02	1.41	0.28	1.45	1.15	0.61
Situational variables						
Mind made up						
Yes (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
No	0.94	1.56	1.21	1.81[e]	2.75[f]	3.40[f]
Wants pregnancy in future						
No (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Yes	1.13	0.78[d]	0.75	0.92	1.33	1.45[d]
Not sure, didn't care	1.09	0.79	0.81	0.81	1.02	1.08
Partner support for abortion						
Supportive (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Man doesn't know	1.21	1.50[d]	2.18[f]	1.64[d]	1.50[d]	1.01
Unsupportive	0.93	0.70	0.68	0.99	1.28	1.34
Neither, unsure	1.17	1.03	0.99	1.59	1.07	1.02

[a] Data adjusted for complex sampling design and intracluster correlation at clinic level.
[b] An odds ratio of greater than 1.00 indicates increased odds of needing to keep the abortion a secret.
[c] An odds ratio of greater than 1.00 indicates increased odds of caring about other people's opinions about abortion.
[d] Significant at $P < 0.05$.
[e] Significant at $P < 0.01$.
[f] Significant at $P < 0.001$.

liberal area of the country. However, 5 of the 9 states in the region are actually considered politically conservative. Abortion access is extremely poor in Colorado, Idaho, Utah, and Wyoming, and none of these 4 states provide Medicaid funding for abortions [18]. In addition, Idaho and Utah are considered to be 2 of the most prolife states nationwide [19].

Previous qualitative research indicates that many women believe having multiple abortions is wrong and assume that others do also [21]. Given this societal-level belief, it could also be assumed that women who have multiple abortions would feel more stigmatized than other women. The study found that black, white, and Hispanic women who reported having had 2 or more previous abortions were actually less likely to perceive and internalize stigma than their counterparts who reported not having had a previous abortion. The internalized stigma measures did not achieve statistical significance at the 0.05 level, but the magnitude and

direction of the associations were similar to those of the perceived stigma. Of course, the causal direction of these relationships cannot be determined from the data. It may be that women who have had previous abortions perceive less stigma because of their past experiences with abortion, or it may be that women who perceive less stigma are more likely to have multiple abortions.

The decision to have an abortion is often a difficult and complex one and is a stressful event for many women. Although the overwhelming majority of women have made up their mind about the abortion at the time they made the appointment, this analysis revealed that the 8% who had not were at increased risk of perceiving stigma, both from friends and family and from regular healthcare providers. Although these results did not achieve statistical significance for all racial/ethnic groups, the pattern of association (direction and magnitude of the odds ratios) was consistent within and across the perceived stigma measures. This group of women was also more likely to report caring about what other people thought of their decision to terminate a pregnancy (an indicator of internalized stigma). Although there are many reasons why a woman may not have yet decided about the abortion at the time of making an appointment, the findings draw attention to the ways in which stigma may interfere with women's decision making about abortion. Believing that other people will look down on you for your decision or being concerned about how other people feel about abortion may confuse or delay the decision-making process.

For some women, deciding whom to tell about terminating a pregnancy is also a complex and difficult decision. At the time of the abortion, 15% of the total sample had decided not to tell the man involved with the pregnancy about the abortion; these women, regardless of race/ethnicity, were generally more likely than women with a supportive partner to perceive stigma from others, and this group also was more likely to need to keep the abortion a secret from friends and family and to care about other people's opinions of their abortion decision. It should be noted that statistical significance was not achieved for all racial/ethnic groups for all 5 outcomes, although the patterns of association in terms of direction and magnitude were consistent. It is possible that a woman may decide not to tell a partner about her decision to terminate a pregnancy because of fear of judgment or some other negative consequence, such as fear of abuse [22]. If a woman is trying to keep the abortion a secret from the man involved, an effective way is to conceal the pregnancy or abortion from others as well. However, this creates a situation where the woman is not only isolated in her abortion experience, but also potentially fearful that someone may find out inadvertently. Both of these circumstances may create undue stress and anxiety in a woman's life.

Interestingly, 2 of the 4 characteristics most strongly associated with increased stigma in terms of both statistical significance and magnitude of the odds ratios – namely, having one's mind made up about the abortion at the time of making the appointment and partner knowledge of the abortion – are what were deemed "situational" variables and the most proximate to a woman's abortion decision. It is worth noting that although these were most strongly associated with stigma, they were not common among the sample: only 8% of women reported not having their mind made up at the time of making the appointment, and just 15% had not told their partner about the abortion. However, these findings may indicate that the current situation of a woman's life plays the most important role in determining how she responds to societal- and family-level stigma. Another variable strongly associated with stigma, region of residence, provides evidence of the critical role that social context plays in determining whether or not a woman perceives and/or internalizes abortion stigma.

4.2. Study strengths and limitations

Strengths of the study include its large sample size, which allowed for detecting small differences between groups that would not have been possible with a smaller sample, and the use of several items to measure two different domains of stigma.

The study also has several limitations. As with any survey research, there is a risk that response bias may have impacted the results. First, the survey items may not have adequately measured perceived and internalized stigma. To minimize this risk, the survey items were adapted from validated items specifically developed to measure social stigma, and the items were also piloted-tested to ensure validity and reliability. Also, reporting or recall error may have occurred if women did not accurately report events that happened in the past (e.g. previous abortions). Such "errors" make it difficult to establish a valid association between independent and dependent variables. There is no way of empirically confirming whether reporting or recall error may have occurred. The limitations of the findings based on item-specific nonresponse must also be acknowledged. The cross-sectional nature of the data means that all analyses are correlational and causal relationships cannot be determined; for example, with regard to the inverse relationship found between multiple abortions and stigma.

The timing of the study is also a limitation. Data collection occurred on the day a woman had an abortion; therefore, the study did not measure experienced stigma. It was felt that asking women about experienced stigma at that time would not produce an accurate estimate. The items used to measure perceived stigma on the APS combined friends and family, making it difficult to pinpoint from whom women perceive the most stigma. Additionally, for many women, the decision to have an abortion is made soon after finding out about the pregnancy. Therefore, some women have very little "lived experience" with the abortion decision, and may not have had time to tell people close to them about their decision, much less reflect on events that transpire because of disclosure.

4.3. Implications for future research

This study provides important information on abortion stigma in the USA, although its quantitative cross-sectional nature limits interpretation of the findings. Future quantitative research could benefit from more refined measures of perceived stigma to identify the specific source(s) of stigmatization. More refined measures of internalized stigma could provide insight into the reasons why so many women need to keep their abortion a secret, as well as how other people's opinions about abortion impact how a woman feels about her abortion decision. Lastly, research measuring all 3 domains of stigma – perceived, experienced, and internalized – will likely provide richer data.

Future research needs to explore the underlying causes of perceived, experienced, and internalized stigma, and improve understanding of how a woman's social context and community contexts, and close relationships contribute to abortion stigma at the national level. Along these same lines, researchers should examine why some racial/ethnic groups are more or less likely to perceive or internalize stigma than others. The study found that non-Hispanic black women were least likely to report perceived or internalized stigma, yet why this group of women may be more resilient to social stigma than others can only be hypothesized.

Future research should investigate the impact perceived stigma and secrecy about abortion may have on women's health and well-being, and if a negative impact is found to exist, whether the impact differs across groups of women.

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Conflict of interest

The authors declare that they have no conflicts of interest.

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