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Attitudes Toward Abortion After Receiving vs. Being Denied an Abortion in the USA

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Abstract

U.S. public attitudes toward abortion have been studied extensively, but little is known about these attitudes among women who seek abortion. This mixed-methods study explores women's attitudes about abortion after receiving or being denied an abortion. Data are from the Turnaway Study, a prospective, longitudinal study of women seeking abortions at 30 U.S. facilities. Participants presented just before a facility's gestational limit and received abortions, or just beyond the limit and were denied abortions. Using mixed effects logistic regression, we assessed 812 participants' attitudes about abortion over four years. At five years after abortion-seeking, we conducted in-depth interviews with 31 participants; this analysis includes the comments of 19 participants who discussed their abortion attitudes in those interviews.

We find that six months after abortion-seeking, nearly all women supported abortion legality in all (80%) or some (18%) situations, yet 20% also believed abortion is morally wrong. Women denied an abortion were significantly less likely to support the legal right to abortion at six months (62%) and 4.5 years (77%) after abortion-seeking than women who had received a near-limit abortion (78% and 88%, respectively). In open-ended interviews, women expressed nuanced views, including reporting increased empathy for others facing an unwanted pregnancy.

Women's own reproductive experiences impact their views on abortion. Distinguishing between morality and legality of abortion is critical in understanding abortion attitudes.

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Conflict of Interest:

Katie Woodruff declares that she has no conflict of interest.

M. Antonia Biggs declares that she has no conflict of interest.

Heather Gould declares that she has no conflict of interest.

Diana Greene Foster declares that she has no conflict of interest.

COMPLIANCE WITH ETHICAL STANDARDS

All the research described in this study received ethical approval from the University of California, San Francisco Committee of Human Research, and all procedures were performed in accordance with the ethical standards of this committee. Informed consent was obtained from all individual participants included in the study. None of the authors has any conflict of interest.

Keywords

abortion; attitudes; public opinion; political attitudes; abortion policy

INTRODUCTION

Attitudes toward abortion in the U.S. have been assessed regularly since the 1970s, with public opinion on legality remaining split and largely stable over decades. In 1975, 1985, and 2005, approximately 20% of Gallup poll respondents said abortion should be legal in all circumstances, about 20% said it should be illegal in all circumstances, and about 55% supported legal abortion in some circumstances. Yet in the mid-1990s and again in the most recent Gallup polls, the percentages supporting legal abortion increased to 29%–33%, while those favoring illegality in all circumstances dropped to 15–18%. (Abortion: Gallup Historical Trends, 2014)

Attitudes on the morality of abortion may also be shifting. From 2002–2014, an average of 50% of Americans called abortion morally wrong while 39% called it morally acceptable. In a 2016 poll, however, about 47% of Americans said abortion is morally wrong, while 43% said it is morally acceptable. (Saad, 2016)

Americans' views on when abortion is appropriate are highly responsive to context. Studies have consistently found more support for abortion in cases of a woman's poor mental or physical health, rape, or fetal anomaly, than in cases of financial hardship, relationship troubles, or other difficult life circumstances. (Gillespie, Ten Vergert, & Kingma, 1988) (Bane et al., 2003) (Cook, Jelen, & Wilcox, 1993) (Smith & Son, 2013) (Hans & Kimberly, 2014) Individual attitudes on abortion are complex and sometimes appear contradictory: e.g., among respondents who say abortion is murder and/or morally wrong, many also say it should be an individual choice left to a woman and her doctor. (Cox et al., 2011) (Moral Issues: Gallup Historical Trends 2014) (Newport & Bird, 2017) Even many Americans who believe that life begins at conception find legal abortion acceptable in many situations. (Wilcox & Riches, 2002)

Demographics such as race/ethnicity and gender have been examined as possible predictors of abortion attitudes. In the two decades after the *Roe v Wade* ruling in 1973, African Americans were less likely than whites to support legal abortion, but by the late 20th century this racial gap in attitudes had narrowed. Researchers have hypothesized that what appeared to be a racial gap was actually explained by religiosity and education levels; as younger generations of African Americans were more educated and less religious than their predecessors, their attitudes toward abortion more closely matched those of their white peers. (Jelen & Wilcox, 2003) In 2017, African Americans (62%) were more likely than whites (58%) to believe abortion should be legal in all or most cases. Among Latinos in the U.S., opinion on legality is evenly split: 50% say abortion should be legal in all or most cases, while 49% say it should be illegal. (Pew Research Center, 2017)

While researchers have hypothesized that women are more likely to support legal abortion than men, many studies have failed to find that gender is a significant predictor of abortion

attitudes.(Altshuler, Gerns Storey, & Prager, 2015)(Lizotte, 2015)(Wall et al., 1999) However, as women report being more religious than men, and a number of studies have shown that religiosity is associated with disapproval of abortion(Adamczyk 2013; Fisher 2011; Jelen and Wilcox 2003; 2005), religiosity has been hypothesized to be a suppressor variable obscuring the expected impact of gender on abortion attitudes.(Barkan, 2014) Indeed, studies that examine gender while controlling for religiosity have found a small but consistent gender gap in abortion attitudes; e.g., at any given level of religiosity, support for legal abortion is higher among women than among men.(Barkan, 2014)(Lizotte, 2015)

Until recently, little has been known about how women who have abortions view abortion and its regulation. Thomas et al (Thomas, Norris, & Gallo, 2017) find that about 4% of U.S. abortion patients believe abortion should be illegal in all or most cases. There is some indication that women’s views about abortion and abortion restrictions are different when examining their own experiences with abortion than when reflecting on other women’s experiences. One study (Cockrill & Weitz, 2010) found that abortion patients supported policies that they felt could ensure informed decisions for “other women,” while they themselves considered their own decision-making to be well-informed and responsible. At the same time, many did not support waiting periods or financial restrictions and suggested that the government does not show sufficient empathy for women who seek abortions. Another study (Nickerson, Manski, & Dennis, 2014) found that many abortion patients were sympathetic to the struggles of others to pay for abortion care, but many also discredited other women’s reasons for seeking abortion, used pejorative terms to describe other abortion patients and their circumstances, and sought to distance themselves from other women seeking abortion. Another study, exploring women’s perspectives on abortion clinical care, (Altshuler, Ojanen-Goldsmith, Blumenthal, & Freedman, 2017) found that some patients felt judged by others seeking abortion. These qualitative studies suggest that women’s perspectives on whether abortion “should” be available to other women are complex, reflecting stigma as well as empathy.

One notable gap in the literature is an understanding of how women’s own reproductive experiences, including the experience of seeking and receiving or being denied an abortion, may shape their perspectives on abortion. Abortion-seeking is a common experience among U.S. women(Jones & Jerman, 2017), and many women are denied access to abortion by increasingly restrictive state policies, including those banning abortion after certain gestational ages.(Jones & Jerman, 2014) Yet little is known about how this experience may influence abortion attitudes among this population. This work seeks to fill that gap by using both quantitative and qualitative methods to explore how different experiences with abortion may affect women’s attitudes on abortion legality and morality.

METHODS

Study design

Data are from the Turnaway Study, a prospective, longitudinal study of 956 women seeking abortions at 30 U.S. facilities. In the U.S., each abortion facility has its own gestational limit up to which abortions will be provided; these typically range from 12 to 24 weeks gestation, (Jerman & Jones, 2014) and are influenced by state and federal policy as well as provider

preferences.(Guttmacher Institute, 2018) For this study, recruitment sites were chosen because they had the latest gestational limit of any abortion facility within 150 miles. All but two sites agreed to participate. One site was replaced with a facility that served a similar volume of patients and catchment area. Thirty abortion facilities located in 21 states throughout the U.S. served as our recruitment sites. Women were recruited from these facilities from 2008 to 2010, and interviewed by telephone 8 days after having or being denied an abortion, then every six months for five years. Women were interviewed regarding their living situation, education, childbearing experiences, physical and mental health, attitudes about abortion, and religiosity.

English- and Spanish-speaking women ages 15 and older who were seeking abortion were eligible to participate. Women were recruited into three study groups in a 2:1:1 ratio. Study groups included: 1) the *Near-limit* abortion group, which included women who sought and received an abortion within two weeks before a facility's gestational limit, 2) the *Turnaway* group, which included women who sought but were denied abortion care because they were within three weeks over a facility's gestational limit, and 3) the *First-trimester* abortion group, women who sought and received an abortion in the first trimester. The *First-Trimester* group served to compare whether the outcomes of women seeking earlier care differed from those receiving care later in pregnancy, given that the vast majority (92%) of abortions in the U.S. are performed in the first trimester of pregnancy.(Pazol et al., 2013) The *Turnaway* group was further divided into those who gave birth (*Turnaway-birth* group) and those who miscarried or had an abortion elsewhere (*Turnaway-no-birth* group).

In order to collect additional perspectives about women's experiences and attitudes, we conducted qualitative in-depth telephone interviews with 31 subjects who had completed the 5-year protocol. The majority of these participants (28) were randomly selected from the pool of participants who had completed the 5-year semi-annual interview by October 2014 and had agreed to future contact by the researchers. To ensure that the participants included in our qualitative interviews reflected the range of backgrounds and pregnancy/parenting outcomes in the overall study, attempts were made to recruit all prior participants who spoke Spanish as their primary or only language and all those who had voluntarily placed a baby for adoption. Three such participants were recruited for in-depth interviews.

The qualitative interviews, conducted by the third author, were open-ended and ranged from 30 minutes to two hours in length. Questions explored participants' pregnancy-related experiences and emotions when they first discovered they were pregnant, when they had an abortion or were turned away, and in the 5 or more years since seeking an abortion. Participants were asked to share their perceptions of how their experiences with the index pregnancy, abortion, birth, parenting, and/or adoption affected their lives, as well as their views on abortion. Qualitative interview questions did not systematically elicit all participants' attitudes about abortion legality or morality in particular; instead, open-ended questions prompted women to reflect on their personal experiences with their index pregnancy and the resulting abortion or birth. Nearly all participants were asked the question "Looking back, how do you think the experience of having an abortion [*OR having a baby*] has changed your perspective on abortion [*OR life*], if at all?" All interviews were audio-recorded, transcribed, and translated if necessary.

All the research described in this study received ethical approval from the University of California, San Francisco Committee of Human Research. Study details have been previously described.(Dobkin et al., 2014),(Sisson, Ralph, Gould, & Foster, 2017)

Outcome variables

Women’s attitudes on abortion morality and legality served as our two outcome measures. Women were asked: “Do you believe that abortion is morally wrong?” and were given the option to respond “1. Yes, 2. No, and, 3. Depends on the circumstances.” To create a dichotomous outcome, “Yes” and “Depends” were recoded as 1, and “No” recoded as 0. This served as our *Moral Disapproval of Abortion* outcome. Women were also asked: “How would you describe your political view of abortion?” followed by “Would you say you are 1. In favor of women having the legal right to have an abortion?, 2. In favor of women having the legal right to have an abortion but only in special situations like rape or incest?, or 3. Against women having the legal right to have an abortion in any situation?” To create a dichotomous outcome, the second two options were recoded as 0. This served as our *Support for Legal Abortion* outcome.

These outcome variables of interest were collected yearly starting six months after abortion seeking. This analysis includes baseline demographic data from the first interview (one week post-abortion-seeking), and, for the outcome data, uses five annual interviews conducted from six months to 4.5 years after abortion-seeking for the outcome data.

Independent variables

Our main independent variables of interest included study group, time, and group by time interactions to assess whether study group trajectories differed over time. Study group was a four-part variable which included: 1) women who obtained an abortion just under a facility’s gestational age limit (*Near-limit* abortion group), 2) women who were denied an abortion and carried the pregnancy to term (*Turnaway-birth* group), 3) women who were denied an abortion and miscarried or had an abortion elsewhere (*Turnaway-no-birth* group), and 4) women who obtained a first-trimester procedure (*First-trimester* abortion group). Time was measured in years since seeking an abortion.

Covariates

Our control variables consisted of factors believed to be associated with our study outcomes and included age, self-reported race/ethnicity, highest level of education, marital status, employment, parity, history of abortion, and religious attendance growing up (never, three times a year or less, and more than three times a year). All adjusted analyses presented here controlled for these factors.

Statistical analyses

This analysis was limited to women who completed the baseline and at least one additional subsequent interview. For our baseline analyses we tested for differences between the *Near-limit* group and the other three study groups using mixed effects linear, logistic, and multinomial regression analyses, accounting for clustering for site (Table 1). To test whether the trajectories for our outcomes differed by study group at baseline or over time, we

employed mixed effects logistic regression analyses accounting for clustering by site and individual. We tested whether adding quadratic terms for time or random slopes for individuals improved the model fit and included these when indicated by a significant ($p < .05$) likelihood ratio test. We conducted a set of unadjusted analyses as well as a set of adjusted analyses which included baseline covariates. Post-estimation tests were used to estimate whether trajectories changed over time or differed by study group (*lincom* and *testparm* commands in Stata). All analyses were performed in Stata version 14. (Stata Statistical Software, 2015)

Qualitative analysis

Transcripts of 31 open-ended in-depth interviews were coded using inductive and deductive techniques in Atlas.ti 7. This analysis draws data from the code “abortion attitudes,” which includes statements made by 19 participants about their perspectives on abortion in general. This code included comments on attitudes about abortion generally, including the legality or morality of abortion; it excluded emotions about participants’ own abortions, if they had one, since that theme is explored elsewhere. (Rocca et al., 2015) (Rocca, Kimport, Gould, & Foster, 2013) Finally, we used modified grounded theory (Charmaz, 2014) to identify emergent themes from this code. Similar themes were repeated across interviews, suggesting that saturation was reached on the topic of women’s general abortion attitudes.

Consistent with sequential mixed-methods study design (Creswell, 2014), for this study the qualitative data was considered a secondary analysis, aimed at illuminating the quantitative study data. The quantitative data was collected and some preliminary statistical analyses were performed before the in-depth interviews were conducted. These analyses were done to support other research based on this quantitative data. The statistical analysis of data on abortion attitudes was performed separately, after the in-depth interviews were conducted. Thus the quantitative results on attitudes did not influence the in-depth qualitative interviews.

RESULTS

Among eligible participants approached, 37.5% consented to five years of semi-annual interviews, of whom 85% ($n = 956$) completed the baseline interview. At approximately six months after seeking an abortion, 880 women (92%) completed the second interview, and 561 women (59%) completed the 10th interview (4.5 years post-abortion seeking). Participation at baseline and through the end of the study period did not differ significantly by study group. One study site ($n=76$) was dropped from all analyses because 95% of their *Turnaways* went on to receive an abortion elsewhere. Three participants originally intending to have an abortion at the time of recruitment later reported that they had not had an abortion, and were excluded from the final sample. Analyses were limited to the women who completed at least one interview after baseline, leaving a final sample of 812 participants. Among the 191 remaining *Turnaways*, 39 received an abortion elsewhere and six reported having a miscarriage later. The final four study groups included 381 *Near-limits*, 146 *Turnaway-births*, 45 *Turnaway-no births*, and 240 *First-trimesters*. (See recruitment flowchart, Figure 1.) Baseline sample characteristics are presented in Table 1.

At the time of seeking an abortion, study groups did not differ from the *Near-limits* in terms of education level, place of birth, marital status, history of previous abortion, religious affiliation, or frequency of religious attendance (Table 1). Women in the *Turnaway-birth* group were significantly younger than *Near-limits*, had later gestation (per study design), were less likely to be employed, and more likely to be nulliparous. When compared to *Near-limits*, women in the *First-trimester* group were more likely to be white and employed. At six months, participants were asked whether their attitudes towards abortion had changed since abortion seeking. Women in the *Near-limit* group were significantly more likely to report that their attitudes had become more supportive of abortion rights (33%) than *Turnaway-births* (9%); 21% of *Turnaway-births* reported they had become less supportive of abortion rights, while only 6% of *Near-limits* reported this change (Table 1).

Moral disapproval of abortion

At six months after abortion-seeking, according to unadjusted values 20% of participants held the belief that abortion is morally wrong, 15% felt the morality of abortion depends on the circumstances, and 65% did not believe abortion is morally wrong. At this six-month assessment, women in the *Turnaway-birth* (30%) group were significantly more likely to believe abortion is morally wrong than *Near-limits* (18%, Table 1). Differences were statistically significant in unadjusted (OR 2.64, 95% CI 1.17, 5.96) and adjusted models (aOR 2.574, 95% CI 1.21, 5.44) (Table 2, Figure 2) and remained throughout the study period, according to post-estimation tests of differences in predictive margins. The belief that abortion is morally wrong declined significantly over time across groups (aOR, 0.82, 95% CI 0.70, 0.96). Women who were African American, Latina, or of other or mixed race/ethnicity were significantly more likely to believe that abortion is morally wrong than white women. Women who were separated, divorced or widowed, and women with frequent religious attendance growing up were also significantly more likely to believe abortion is morally wrong. Nulliparous women, women with a previous history of abortion, and women with a college degree were significantly less likely to believe abortion is morally wrong (Table 2).

Support for legal abortion

At six months, 80% of women were in favor of the legal right to abortion in all situations, 18% were in favor in some situations, and 3% were against the legal right in any situation. At this six-month assessment, according to unadjusted values women in the *Near-limit* group (80%) were significantly more likely to be in favor of the legal right to abortion in any situation than *Turnaway-births* (59%) and less likely to be in favor than women in the *First-trimester* group (89%, Table 1). Differences were statistically significant in unadjusted and adjusted models (Table 2, Figure 2). Results of a series of post-estimation tests indicated that favoring the legal right to abortion increased significantly over time for all groups, except the *First-trimester* abortion group, whose attitudes remained relatively flat at a high level of support (Figure 2). Support for legal abortion among the *Turnaway-birth* group was lower than among *Near-limits* throughout the study period. The *First-trimester* group differed significantly from the *Near-limits* at six months post-abortion seeking only, and the *Turnaway-no-birth* group were significantly more likely than the *Near-limits* to favor the legal right to abortion from 1.5 to 4.5 years post-abortion seeking (Figure 2).

Women who were African American, Latina, or of other or mixed race/ethnicity were significantly less likely to be in favor of women having the legal right to an abortion than white women. Women who were older, nulliparous, with a previous history of abortion, and with some college education were significantly more likely to favor the right to abortion (Table 2).

Incongruence of attitudes on morality and legality

To assess the extent to which attitudes on legality and morality of abortion are incongruent, we calculated the proportions of our sample that believe abortion is morally wrong in all circumstances yet favor its legal availability in all situations, and those that believe it is not morally wrong yet are against the legal right to abortion. At six months post-abortion-seeking, among women who believe abortion is morally wrong (n=154), 45% (70/154) nevertheless support the legal right to abortion in all circumstances, and 40% (61/154) support it in special circumstances such as incest or rape. Conversely, among those who believe it is not immoral (n=508), none were against the legal right to abortion in all circumstances, yet 9% (44/508) were in favor only in special circumstances. Longitudinal analysis showed no study group differences at baseline or over time in incongruent attitudes (not shown).

Qualitative results

Qualitative interviews conducted with women five or more years after seeking an abortion revealed nuanced attitudes about abortion and illustrated how attitudes can evolve over time. During the interviews, 19 of the 31 women interviewed (Table 3) described their past and/or current attitudes on abortion. Among those, two women made only favorable statements about abortion, two women made only unfavorable statements, 11 made mixed statements about abortion, and four did not make a clear statement in either direction. Nearly half reported that their attitudes on abortion had changed as a result of their experiences with their index pregnancy and subsequent birth or abortion.

A striking change in attitudes, described by women spanning all study groups (two *Near-limits*, one *First-trimester*, and two *Turnaways*), was having become more understanding and empathetic towards other women facing an unintended pregnancy and considering abortion:

It's changed my view of abortions. At first I thought that no one should be allowed to have an abortion with the exception of women who were raped... Then, when I was there with a bunch of girls who were also having an abortion the same day, I kind of understood of why women would have an abortion. It's not because they want to, it's because that sometimes they have to. Sometimes they would have a better life for themselves because they wouldn't be able to survive their life with a child.

- Age 19 at baseline, *Near-limit abortion* group

Before my experience, [my view] was that abortion was reserved for people who were raped and traumatic events and things like that. You know, I think that there's a better way... Lots of people out there would love to have a baby, and I think if you're strong enough to do it, I think that adoption is a much better option. But, it

is a woman's choice, it's her perspective, she's the one that carries the baby for nine months, and if that's her decision, then it should be.

- Age 26 at baseline, *Turnaway-birth* group

Some participants expressed this empathy for women seeking abortion even while continuing to hold mixed views about whether and when abortion should be available. Asked whether she thought the experience of having her daughter had changed her perspective on abortion at all, one participant who was denied an abortion and subsequently gave birth at 21 years old said:

That's hard, because I hate to be a hypocrite and say that I'm against abortion if it's something that I once thought about really doing. And I really considered doing it. And if someone were to ask me, I'd be against it. But then again, to be put in that situation, I understand what they're going through. Then again, I don't understand how -- I think I'm more against the late-term abortion.

- Age 21 at baseline, *Turnaway-birth* group

A few women, including women who had and who were denied an abortion, conveyed that their personal experiences of pregnancy and abortion or birth had *not* changed their views on abortion, regardless of whether their attitudes were in support of or against abortion access. For example, one woman asserted:

It hasn't [changed]. Like I said, it's woman's choice... I believe that it is always a woman's choice. It hasn't changed my opinion whatsoever. I don't necessarily believe in it as a form of birth control, but it is -- it's still a woman's choice.

- Age 28 at baseline, *First-trimester abortion* group

Some people who claimed unchanged abortion attitudes still reported increased empathy for women facing an unintended pregnancy. One woman who was 26 years old when she had an abortion said:

I've always felt that life was precious. I've always felt that it was a gift. I don't think that it changed my perspective. It just made me appreciate others who have gone through that situation. Whereas, before, I was like, "What? How can you do that?" Then, when you're faced to be in that situation yourself, it's a little bit different. But, it just kind of, I think, opened my mind to people and their situations.

- Age 26 at baseline, *Near-limit abortion* group

DISCUSSION

Our findings substantiate earlier observations that people seeking abortion do not necessarily support abortion rights.(Thomas et al., 2017)(Norris et al., 2011)(Finer, Frohworth, Dauphinee, Singh, & Moore, 2005) In our sample of women seeking abortion, while most are in favor of legal abortion and think it is moral, one in five do not support the legal right to abortion in all situations, and the same proportion believe abortion is morally wrong. Yet very few (3%) in our sample oppose the legal right to an abortion in *any* situation; this is a

small percentage compared to the approximately 15–20% who have consistently reported this view among the general U.S. public.(Gallup 2014; Smith & Son 2013)

This research demonstrates that views on the morality of abortion do not necessarily correspond with attitudes toward its legality, even among women seeking abortion. This supports prior research finding that overall, Americans distinguish between legality and morality in their attitudes towards abortion; nearly half say abortion is morally wrong, while only 1 in 5 believe it should be illegal.(Gallup 2014) Similarly, our study finds that despite mixed views on the *morality* of abortion, support for abortion *legality* was high for both women who received an abortion and those who were turned away.

While this mix of views may appear contradictory, abortion is by no means the only issue on which people hold apparently discordant views of morality and legality. A significant number of Americans view both physician-assisted suicide and same-sex marriage as morally wrong, yet they do not necessarily want to make these actions illegal.(Newport & Bird, 2017) Similarly, the view that smoking marijuana is immoral does not necessarily correlate with opposition to legalizing marijuana use.(Pew Research Center, 2013) Our work supports prior calls to distinguish between legality and morality in public debate on abortion policy.(Watson, 2018)

Perspectives on abortion can change over time. For both *Turnaways* and women who received the abortion they sought, believing that abortion is morally wrong decreased, and support for abortion rights increased, over time. Yet, differences between the two groups remained statistically significant throughout the study period. Our data show that women who are denied an abortion and who go on to give birth become less supportive of legal abortion and are more likely to believe abortion is morally wrong, compared to those who received the abortion they sought. This finding may be understood as an example of the psychological process of post-decision consolidation, defined as an attempt to resolve cognitive dissonance through post-hoc reassessment of a decision or life event in order to increase the attractiveness of the chosen alternative and decrease the attractiveness of rejected options.(Brehm, 1956)(Gerard & White, 1983)(Abelson & Levi, 1985)(Svenson, 1992) For example, even though in our study the “decision” not to have an abortion was imposed on *Turnaways*, not freely chosen by them, some of these women later came to embrace this outcome as the best result for them -- a shift that helped them make sense of their experience. It may be that they also came to believe that since this outcome was ultimately best for them, others should not have abortions either.

One strength of this study is the mixed-methods design, which brings more nuance to our understanding of participants’ abortion attitudes. In the qualitative interviews, the open-ended questions allowed women to speak about their multi-dimensional personal views and how those views changed over time. An important finding was that a number of women reported increased empathy for others facing unwanted pregnancy. Interestingly, increased empathy was not limited to any one participant group and was sometimes present even when the women themselves held negative or mixed attitudes toward abortion.

Several limitations may constrain the generalizability of these findings. Consistent with framing theory (Iyengar, 1991) (Entman, 1993), the wording of survey questions about abortion attitudes has an important impact on respondents' answers. Rather than asking whether abortion should be *legal* in a given context, Hans and Kimberly (2014) asked whether abortion should or should not be an *option available* to a given woman. They found that respondents' initial strong views in the absence of details were likely to shift direction upon hearing contextual information that challenged their initial assumptions. Our question wording about abortion legality in the quantitative surveys did not provide such contextual details, only posing scenarios of rape or incest as a middle ground category (between legal in all or no situations). This may have led to an overestimation of extreme positions on abortion, and is one reason our qualitative data are so important in illuminating people's nuanced, complex perspectives on abortion.

The timing of our data collection waves meant that we first asked questions about morality and legality of abortion six months after participants' abortion-seeking. We do not have data on how subjects felt about abortion before becoming pregnant. This means that the abortion perspectives presented here are necessarily colored by the experience of having an unwanted pregnancy and deciding to have an abortion (though the results of our question about whether their views had changed in the last six months sheds some light on what they perceived their attitudes to be at the time of seeking an abortion). Ideally, future research should prospectively explore how attitudes on abortion change across the reproductive lifecourse, starting before an unintended pregnancy occurs. Further, our qualitative interviews explored women's own personal experiences and did not explicitly ask participants their attitudes on abortion legality and morality (though several volunteered this perspective anyway). Therefore we cannot extrapolate from their comments in the qualitative interviews to their general attitudes on legality and morality.

Finally, the study findings must be considered in light of the Hawthorne effect, which suggests that study participants may alter their behavior as a consequence of being studied. (McCambridge, Witton, & Elbourne, 2014) It is possible that the repeated interviews caused our participants to reflect on abortion more often than women in the general population, thus influencing their attitudes in ways we cannot assess. We do not have data to gauge whether the Hawthorne effect played a role in this study, but acknowledge it to be a potential factor influencing these findings.

Nevertheless, this research makes an important contribution in being one of the only longitudinal studies to track attitudes toward abortion among the same women over time. This is a major strength of this work, adding to our understanding of how attitudes toward legality and morality differ, and shift over time. Further, this is the only research to specifically examine how the common experience of facing an unwanted pregnancy and seeking an abortion affects attitudes on abortion. This contributes to our understanding of how people's own reproductive experiences may shape their views on this issue.

Conclusions

Our findings suggest that the majority of women who seek abortion are highly supportive of the legal right to abortion. Yet at the same time, more than a third believe abortion is morally

wrong or can be wrong depending on the circumstances. This study is consistent with prior research suggesting that views on morality and legality do not necessarily correspond,(Scott, 1989)(Newport & Bird, 2017) and further, that abortion values don't always correlate with abortion behavior.(Thomas et al., 2017)(Norris et al., 2011) It is important for both abortion providers and policymakers to recognize that many people who consider abortion to be immoral or even oppose legal abortion do in fact seek and have abortions.

We find that being denied an abortion is associated with a sustained reduction in support for abortion rights. This effect lasted throughout our study period; women who were denied an abortion were significantly less likely (77%) to support the legal right to abortion years later than women who received the abortion they sought (88% of Near-limits and 91% of First-trimesters, 4.5 years later).

However, our qualitative analyses reveal that many women hold mixed or shifting views, or would not impose their own moral views on other women. While public debates are often framed as if opinions on abortion were static, in fact they are responsive to context and may change over time. Future research should explore what factors shift perspectives, and what experiences increase people's empathy, as well as their judgment of others.

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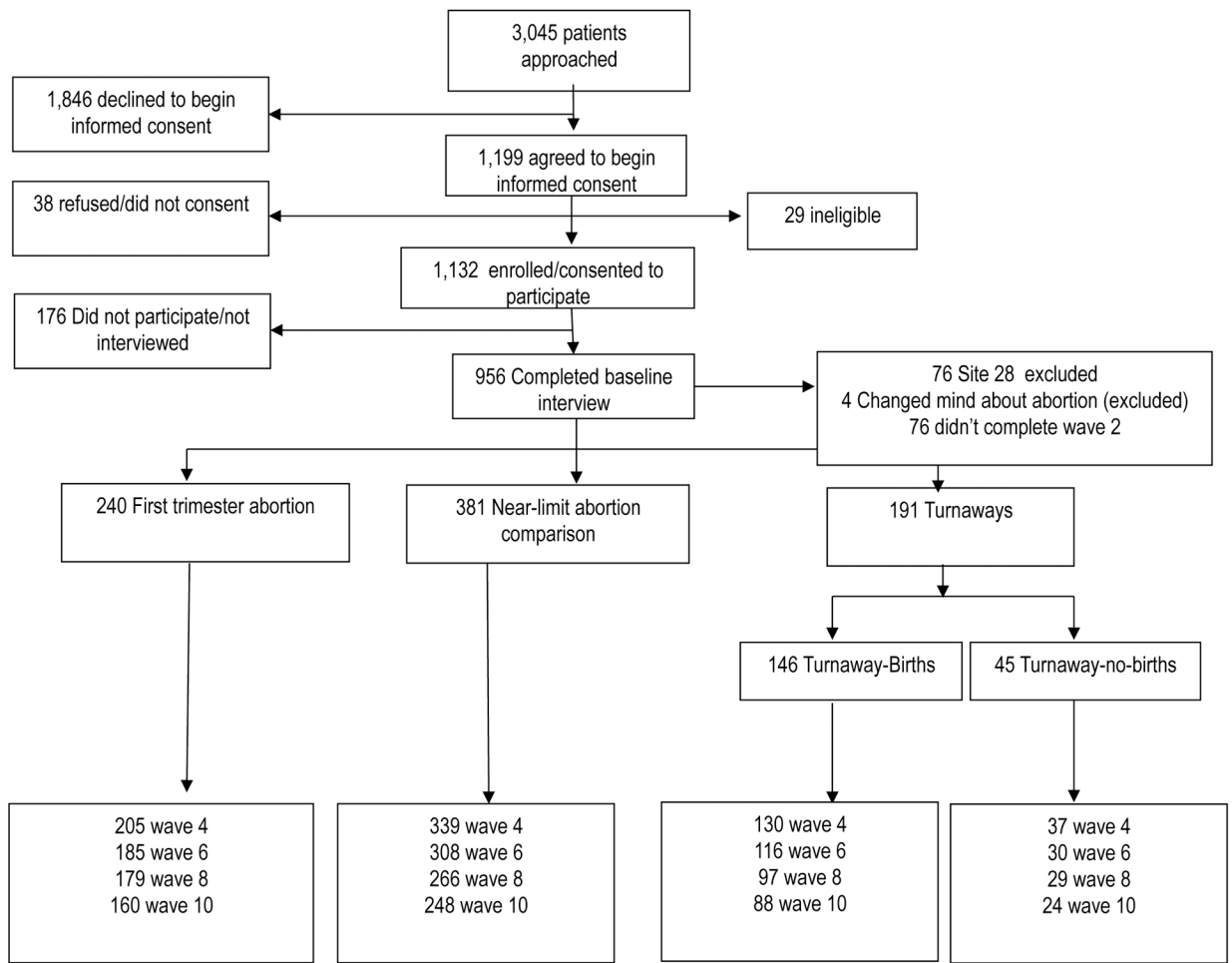


Figure 1.
Study recruitment flowchart



Figure 2. Trends in abortion attitudes over 4.5 years after seeking an abortion Note: Values are marginal probabilities based on results of logistic mixed effects regression analyses adjusting for baseline age, race, education, parity, previous history of abortion, marital status and religious attendance growing up.

Table 1.

Characteristics of participants by study group

	Near-Limits	Turnaway-Births	Turnaway-No-Births	First-Trimesters	Total
Demographics	(n=381)	(n=146)	(n=45)	(n=240)	(N=812)
Age, years (mean)	24.9	23.4*	24.4	26.0*	24.9
Race/ethnicity				*	
<i>White</i>	32%	25%	38%	40%	33%
<i>Black</i>	32%	35%	31%	32%	33%
<i>Hispanic/Latina</i>	21%	27%	16%	20%	21%
<i>Other</i>	15%	14%	16%	8%	13%
Highest Level of Education					
< <i>High school</i>	18%	23%	18%	16%	18%
<i>High school or equivalent</i>	34%	36%	24%	30%	33%
<i>Some college/Technical degree/Associates degree</i>	41%	35%	49%	43%	41%
<i>College degree or higher</i>	7%	6%	9%	11%	8%
Employed	55%	40%*	49%	65%*	55%
Gestational age, weeks (mean)	19.9	23.4*	19.3*	7.8*	16.9
Nulliparous	33%	46%*	40%	36%	37%
Previous history of abortion	48%	40%	47%	53%	54%
Born in the United States	93%	89%	98%	91%	92%
Marital status					
<i>Single, never married</i>	80%	84%	78%	76%	79%
<i>Married</i>	8%	10%	4%	11%	9%
<i>Separated, divorced, widowed</i>	12%	6%	18%	13%	12%
Abortion attitudes					
Changes in abortion attitudes in past six months, at 6 months		*		*	
<i>Have become more supportive of abortion rights</i>	33%	9%	31%	23%	26%
<i>Stayed the same</i>	61%	70%	64%	73%	66%
<i>Have become less supportive of abortion rights</i>	6%	21%	4%	5%	8%
Believes abortion is morally wrong, at 6 months		*			
<i>Yes</i>	18%	30%	11%	19%	20%
<i>It depends on the circumstances</i>	14%	15%	18%	18%	15%
<i>No</i>	69%	56%	71%	63%	65%
In favor of legal right to abortion in all situations, at 6 months	80%	59%*	89%	89%*	80%
<i>In some situations</i>	17%	35%	11%	9%	18%
<i>Against the legal right in any situation</i>	3%	6%	0%	1%	3%
Religion, religiosity, and spirituality					
Religious affiliation					

	Near-Limits	Turnaway-Births	Turnaway-No-Births	First-Trimesters	Total
<i>Protestant</i>	45%	47%	43%	49%	46%
<i>Catholic</i>	22%	22%	25%	16%	20%
<i>Other religion</i>	4%	3%	5%	5%	4%
<i>None</i>	30%	28%	27%	31%	30%
Religious service attendance growing up					
<i>Never</i>	9%	8%	5%	6%	8%
<i>3 times a year or less</i>	12%	14%	5%	15%	13%
<i>At least once a month or more</i>	79%	77%	91%	79%	79%
How religious or spiritual do you consider yourself? (at 6 months)					
<i>Not at all religious</i>	13%	12%	16%	13%	13%
<i>Somewhat religious</i>	67%	75%	67%	64%	68%
<i>Very religious or spiritual</i>	19%	13%	18%	23%	19%

* $p < .05$ for comparisons between *Near-Limits* and other study groups. All values are one-week post abortion seeking unless otherwise indicated (at six months).

Table 2.

Unadjusted and adjusted mixed effects linear and logistic regression models of abortion beliefs

Independent variables	Believes (Yes/it depends) Abortion is Morally Wrong		In favor of women having the legal right to have an abortion	
	Unadjusted OR[95% CI]	Adjusted aOR[95% CI]	Unadjusted OR[95% CI]	Adjusted aOR[95% CI]
Study group, Near-Limits (reference)				
<i>First-Trimesters</i>	1.39[0.70,2.78]	1.68[0.89,3.18]	3.91 [1.62,9.40]	2.70 [1.17,6.24]
<i>Turnaway-Births</i>	2.64 [1.17,5.96]	2.64 [1.17,5.96]	0.14 [0.06,0.35]	0.18 [0.08,0.41]
<i>Turnaway-No-Births</i>	0.74[0.18,2.96]	0.79[0.22,2.84]	3.49[0.61,20.02]	3.62[0.62,21.24]
Years	0.87[0.74,1.01]	0.82 [0.70,0.96]	2.77 [1.56,4.92]	2.68 [1.57,4.57]
First-Trimesters X years	1.08[0.88,1.33]	1.11[0.90,1.37]	0.40 [0.16,0.95]	0.39 [0.16,0.94]
Turnaway-Births X years	0.98[0.76,1.25]	1.00[0.78,1.29]	1.03[0.44,2.43]	1.06[0.46,2.47]
Turnaway-No-Births X years	0.67[0.41,1.10]	0.67[0.40,1.11]	1.64[0.11,24.26]	1.37[1.00,1.52]
Years ²			0.87 [0.77,0.98]	0.87 [0.77,0.99]
First-Trimesters X years ²			1.23 [1.00,1.52]	1.23[1.00,1.52]
Turnaway-Births X years ²			0.99[0.80,1.22]	0.98[0.80,1.20]
Turnaway-No-Births X years ²			1.11[0.53,2.30]	1.14[0.54,2.38]
Covariates				
Race, White (ref)				
Black		3.73 [1.95,7.16]		0.29 [0.13,0.65]
Latina		2.41 [1.15,5.04]		0.38 [0.16,0.93]
Multi-race/ethnicity or other		3.29 [1.46,7.40]		0.27 [0.10,0.73]
Age group, <19 years (ref)				
20–24		0.86[0.42,1.78]		1.71[0.74,3.97]
25–29		0.69[0.30,1.59]		3.38 [1.23,9.29]
30+		0.72[0.29,1.80]		3.98 [1.31,12.15]
Nulliparous		0.29 [0.16,0.52]		3.12 [1.49,6.53]
Previous history of abortion		0.35 [0.21,0.59]		4.04 [2.13,7.64]
Education, < high school (ref)				
High School or GED degree		0.55[0.28,1.09]		1.43[0.64,3.16]
Some college/Technical school		0.74[0.37,1.46]		2.71 [1.17,6.29]
College degree		0.32 [0.10,0.96]		2.71[0.65,11.34]
Marital status, never married (reference)				
Married		1.94[0.84,4.50]		0.55[0.19,1.56]
Separated/Divorced/widowed		3.89 [1.73,8.71]		1.17[0.41,3.29]
Religious attendance growing up, never (ref)				
< 3 times a year		1.75[0.57,5.41]		0.69[0.17,2.81]
More than 3 times per year		4.61 [1.74,12.19]		0.36[0.11,1.20]

Table 3.

Characteristics of in-depth interview participants (n = 19)

Demographics		n
Age, years (mean)	24.9	
Race/ethnicity		
<i>White</i>	32%	6
<i>Black</i>	36%	5
<i>Hispanic/Latina</i>	37%	7
<i>Other</i>	5%	1
Highest Level of Education		
< <i>High school</i>	5%	1
<i>High school or equivalent</i>	42%	8
<i>Some college/Technical degree/Associates degree</i>	42%	8
<i>College degree or higher</i>	11%	2
Employed	58%	11
Gestational age, weeks (mean)	16.11	
Nulliparous	37%	7
Previous history of abortion	26%	5
Born in the United States	75%	15
Marital status		
<i>Single, never married</i>	53%	10
<i>Married</i>	26%	5
<i>Separated, divorced, widowed</i>	21%	4
Study Group		
<i>Near-Limit abortion</i>	21%	4
<i>First-Trimester abortion</i>	32%	6
<i>Turnaway-birth</i>	47%	9