


## ORIGINAL ARTICLE

# Examining abortion attitudes in the context of gestational age

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## Abstract

**Objective:** The aim of this study is to examine how situational abortion attitudes differ when including additional context related to the gestational age of the pregnancy.

**Method:** Ordinary Least Squares Regression models predicting abortion attitudes across four different sets of abortion attitude questions, using data collected from an online panel weighted to match U.S. benchmarks.

**Results:** Later gestational ages are associated with less support for abortion. Although there is some variation in the amount that support decreases across different socio-demographic groups, the predictors of abortion attitudes remain relatively stable across gestational ages. Abortion attitudes questions with no reference to weeks' gestation appear to be the most similar to questions referencing early weeks' gestation.

**Conclusion:** When answering abortion attitude questions that do not include any reference to weeks' gestation, respondents may be more likely to think about abortion early in pregnancy. Including references to weeks' gestation may provide a more nuanced and complete understanding of abortion attitudes.

The 1973 U.S. Supreme Court decision, *Roe v. Wade*, established a constitutionally protected right to abortion up until the point of fetal viability. Although *Roe* did not define a gestational limit that corresponds to fetal viability, the decision divided pregnancy into thirds or trimesters and stipulated that each trimester was subject to different regulations by the state (U.S. Reports: *Roe v. Wade* 1973). The ruling specified that in the first trimester, the state did not have a role in regulating abortion, and the decision to have an abortion is solely between a pregnant person and the attending physician. In the second trimester, the state is permitted to regulate abortion for concerns that are reasonably related to maternal health. In the third trimester, or at the point of fetal viability, states are permitted to either regulate abortion or prohibit the procedure entirely if there are exceptions for cases of life endangerment for the pregnant person. In this

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way, legal abortion in the United States has long been entwined with how advanced a pregnancy is in terms of weeks' gestation. Pregnancies of more advanced weeks' gestation are subject to increased regulation, and recent legislative restrictions have focused on weeks' gestation (Jerman and Jones 2014; Upadhyay et al. 2014). However, research examining abortion attitudes that reference weeks' gestation is limited. As such, the purpose of this study was to assess people's attitudes toward abortion when considering different gestational time points.

Abortion is frequently regarded as a controversial and polarizing social and political issue (Cates 2012; Evans 2002). The 2010s saw an increase in both proposed and enacted state-level abortion regulations (Guttmacher Institute 2016a), and media headlines have reported that abortion has become increasingly polarized in recent years (North 2019). Despite this, aggregate U.S. adults' attitudes toward abortion have remained relatively stable since the 1970s (Smith and Son 2013). Most U.S. adults support access to abortion in some situations, while a minority believe abortion should be illegal under all circumstances (Jelen and Wilcox 2003; Smith and Son 2013). The stability of aggregate trends related to abortion attitudes should not be mistaken for a lack of complexity on an individual level; indeed, many people hold complex, and seemingly contradictory, abortion attitudes (Hans and Kimberly 2014; Jelen and Wilcox 2003; Jozkowski, Crawford, and Hunt 2018). To date, research assessing abortion attitudes has broadly explored how attitudes are affected by two categories of conditions: characteristics of people completing the survey and circumstances related to the pregnancy (Adamczyk, Kim, and Dillon 2020).

Some demographic characteristics have been consistently associated with differences in abortion attitudes, including religious affiliation, religiosity, political affiliation, and education. People who identify as evangelical, Catholic, or other conservative religious denominations tend to have less permissive attitudes toward legal abortion, compared with those who are religiously unaffiliated, atheist, or agnostic (Begun et al. 2016; Hess and Rueb 2005; Jelen and Wilcox 2003). However, Strickler and Danigelis (2002) found that Catholic affiliation has weakened as a predictor of abortion attitudes over time, whereas religious fundamentalism and political liberalism have become stronger predictors. Political liberalism and identifying as a Democrat or Independent are associated with more favorable abortion attitudes, compared with conservatives and identifying as Republican (Begun et al. 2016; Hess and Rueb 2005; Wilcox and Riches 2002). However, Republicans' abortion attitudes have become less polarized and more complex over time (Jozkowski, Crawford, and Willis 2021). There is evidence to indicate that Bible literalism, which refers to the extent that a person believes the Bible is the literal word of God, is a more precise measure to predict abortion attitudes between religious subgroups (Bartkowski et al. 2012; Gay and Lynxwiler 1999).<sup>1</sup> Additionally, people who have a college and/or postgraduate degree typically hold more permissive abortion attitudes than those who complete high school or less (Jozkowski, Crawford, and Hunt 2018; Smith and Son 2013; Thomas, Norris, and Gallo 2017).

Associations between other demographic variables and abortion attitudes have been less consistent. For example, some studies have found gender differences (Lohan et al. 2011; Loll and Hall 2018), while others have found no gender difference after controlling for political and religious affiliation (Hess and Rueb 2005). Some studies have found that older populations are more supportive of legal abortion (Strickler and Danigelis 2002), while others show more support for abortion among younger populations (Smith and Son 2013). Some research suggests that people who identify as black and/or African American tend to have more permissive abortion attitudes than white populations (Begun and Walls 2015), whereas other studies have documented less permissive attitudes among black and African American individuals, compared with those who identify as white (Jelen and Wilcox 2003; Thomas, Norris, and Gallo 2017). Additionally, U.S.-born Hispanic Americans report being more supportive of abortion in all or most cases, compared with Hispanic Americans born outside of the United States (Jones et al. 2019).

More consistently, support for abortion varies significantly across conditions related to pregnancy. Reliably, more people support abortion if there is a fetal anomaly, if the pregnancy was a result of rape, or if the pregnancy endangers the life of the pregnant person (the General Social Survey [GSS] uses "pregnant

<sup>1</sup> Additionally, Bible literalism may be a better indicator than religious denomination or affiliation because there is likely less theological variability across Bible literalists as compared with a specific affiliation. We also include more discussion of Bible literacy in the Online Appendix.

woman”; Smith and Son 2013; Wilcox and Norrander 2002). Other frequently queried circumstances with less support include if the pregnant woman does not want to have more children, has a low income and cannot afford more children, is unmarried, or wants an abortion for “any” reason (Adamczyk 2008).

Research examining abortion attitudes in relation to weeks’ gestation<sup>2</sup> is limited, despite preliminary evidence suggesting that how advanced a pregnancy is strongly influences abortion attitudes. For example, in one poll, 75 percent of participants indicated that abortion should be banned in the second trimester, even though an overwhelming majority favored access to legal abortion in some circumstances (Wilcox and Riches 2002). Gallup assessed whether abortion should be legal by trimester in 1996, 2012, and 2018, and support for legal abortion dropped sharply after the first trimester (Saad 2018). Consistent findings emerged in a few academic studies that specifically assessed weeks’ gestation and abortion attitudes, with people holding less favorable attitudes at later weeks’ gestation (Bumpass 1997; Woodhams et al. 2016). It may be the case that the timing of an abortion influences the extent that people believe abortion is moral (Bruce 2020) because weeks’ gestation may be a proxy for when people think a human being starts to exist. Indeed, perceptions of when life begins are linked with abortion attitudes, with people holding less favorable abortion attitudes once they believe a new human being starts to exist (Crawford et al. 2021; Dozier et al. 2020; Hess and Rueb 2005); this belief may also be associated with weeks’ gestation.

In the United States, the longest-running and most widely used data about abortion attitudes come from the GSS. The GSS has used the same questions about abortion since the 1970s (Smith and Son 2013) with supplemental items included at different times, most recently in 2018. Although the GSS includes questions related to both the respondent’s demographics and abortion attitudes regarding a variety of circumstances surrounding the pregnancy, there is no mention of weeks’ gestation. Bumpass (1997) argued that considering gestational length is essential to understanding people’s abortion attitudes and noted that since weeks’ gestation is not specified in the GSS items, respondents may assume different durations of the pregnancy when completing the items. To investigate, Bumpass (1997) used GSS questions with different gestational lengths appended to the items and found a notable decline in support for legal abortion between the third and fourth months of pregnancy, with a consistent downward trend in support occurring in each subsequent month of pregnancy.

Taken together, people’s attitudes toward abortion are both complex and inadequately measured; the omission of weeks’ gestation from many frequently asked questions represents a potential oversight because we may be missing an important phenomenon that shapes people’s attitudes. Assessing weeks’ gestation is especially salient given that weeks’ gestation has been—and continues to be—connected to abortion policy (Kaiser Family Foundation 2020; Lai 2019). The limited research about abortion attitudes and weeks’ gestation has focused on the difference between respondents’ attitudes toward abortion in the third and fourth months of pregnancy (Bumpass 1997; Woodhams et al. 2016), which is consistent with the trimester framework put forth by Roe. However, many of the newly proposed laws used different week markers, such as 6 weeks in Texas, 18 weeks in Utah and Arkansas, and importantly, the 15-week ban in Mississippi that was heard by the Supreme Court in 2021 (Kaiser Family Foundation 2020). Thus, we have a very limited understanding of U.S. adults’ attitudes toward abortion at time points that do not map neatly onto a trimester framework but that are relevant with respect to state-level legislation.

Given that research assessing abortion attitudes with respect to weeks’ gestation is limited and the influx of abortion-related legislation that includes weeks’ gestation as a limiting factor, we aimed to assess people’s attitudes toward abortion at varying gestational time points. Building from Bumpass’ (1997) work, we used the GSS stem questions in combination with different weeks’ gestation (as opposed to Bumpass’s use of months) to examine demographic correlates associated with people’s attitudes toward abortion at varying times.

<sup>2</sup> Assessing abortion attitudes in relation to weeks’ gestation is complicated because different methods and conventions are used to determine how advanced a pregnancy is. Typically, the first day of a pregnant person’s last menstrual period is used to calculate weeks’ gestation (ACOG Committee on Obstetric Practice 2017). Conversely, fetal age is calculated from the date of fertilization. Therefore, the same pregnancy can have discrepant weeks’ gestation and fetal age by approximately 2 weeks.

## DATA AND METHODS

U.S. adults were recruited in the summer of 2019 from Qualtrics' national participant pool to participate in a web-administered survey. Qualtrics distributed incentivized invitations to eligible people from their pool; eligibility requirements included being 18 years or older, having an IP address in the United States, and being able to read in English. Participants reviewed an informed consent document and were informed that by continuing with the survey, they were indicating their consent to participate. Participants first completed a series of questions assessing demographic characteristics and the six abortion items using the identical wording from the GSS (see the [Supplement Material](#)). Then, participants were randomly assigned to one of two conditions—in one condition, participants received versions that included three different gestational time periods in ascending order, and in the second, they received the same time periods in descending order. Participants were then asked additional questions about abortion attitudes with respect to any time during the pregnancy. The study protocol was approved by the Institutional Review Board prior to data collection.

We used quota sampling to obtain a diverse sample based on gender (50 percent women; 50 percent men), age (12.8 percent 18–24; 17.7 percent 25–34; 16.7 percent 35–44; 17.7 percent 45–54; 16.4 percent 55–64; and 18.8 percent 65+), race/ethnicity (25 percent black/African American; 25 percent Hispanic; 25 percent other; 25 percent white), and political affiliation (30 percent Democrat; 30 percent Republican; 30 percent Independent; 10 percent other). Because we intentionally set quotas to increase demographic diversity to allow for subgroup comparisons, our sample comprised a higher percentage of racial and ethnic minorities than national benchmarks (U.S. Census Bureau QuickFacts 2020). To adjust for this, we used the *ipfweight* command in Stata to generate weights through raking so that our sample was comparable to population estimates in the United States (Bergmann 2011). For information on survey weighting and missing data, see the Online Appendix section: Sample weighting and missing data. See Table 1 for sample descriptive and summary statistics.

Participants answered a series of questions assessing demographic characteristics (see Table 1). To assess religious beliefs, we used both church attendance and Bible literalism (Adamczyk, Kim, and Dillon 2020). Participants were also asked how long they believed a typical pregnancy lasts. We considered responses between 36 and 42 weeks as correct. We also asked participants to identify which abortion label (i.e., pro-choice, pro-life) they most identified with. These terms (e.g., pro-choice, pro-life) are widely used by national polls and surveys when assessing people's position on abortion (e.g., Gallup 2020).

Next, participants were presented with a series of questions based on the items from the GSS. Participants were asked, "Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion..." followed by six specific conditions (Smith and Son 2013; see the [Supplemental Material](#)). We then asked this same set of questions with three different gestational time points appended to the item: (1) 6 weeks (1.5 months) into the pregnancy, (2) 12 weeks (3 months) into the pregnancy, and (3) 20 weeks (5 months) into the pregnancy. Finally, we included a set of items assessing "any time during the pregnancy." For all items, answers of "no" were scored as 0, "do not know" as 0.5, and "yes" as 1, resulting in summed scores ranging from 0 to 6, with higher scores representing more supportive attitudes toward abortion. Frequency statistics for each question at the different gestational time points can be found in Table 1 in the Online Appendix.

We conducted all analyses using Stata MP version 17 (StataCorp 2021). We used ordinary least squares regression (OLS) to predict GSS summed scores for each version of the GSS questions (original wording, 6 weeks, 12 weeks, 20 weeks, and any time during the pregnancy) using socio-demographics characteristics, knowledge of how long a typical pregnancy lasts, and abortion identity labels. We also used the margins command in Stata to generate predictive scores based on the models. The vif command was used to check for issues of multicollinearity. The highest VIF reported was 2.59, reducing any concerns related to multicollinearity. Given the count-like nature of the dependent variables, we examined the normality of the model residuals and found them to be normally distributed.

**TABLE 1** Summary statistics ( $n = 2375$ )

	N or weighted mean (95% Confidence Interval)	Weighted percent or S.D.
<b>Gender</b>		
<i>Men</i>	1182	49 percent
<i>Women</i>	1193	51 percent
<b>Race</b>		
<i>White</i>	596	71 percent
<i>Black</i>	596	14 percent
<i>Other</i>	1183	15 percent
<b>Ethnicity</b>		
<i>Not Hispanic</i>	1781	90 percent
<i>Hispanic</i>	594	10 percent
<i>Age</i>	46.98	17.89
<b>Education</b>		
<i>High School or Less</i>	468	39 percent
<i>Some College/2 Year Degree</i>	800	31 percent
<i>Bachelor's Degree</i>	675	19 percent
<i>Graduate Degree</i>	432	11 percent
<b>Bible literalism</b>		
<i>Literal Word of God</i>	644	28 percent
<i>Word of God, not literal</i>	1046	42 percent
<i>Not word of God</i>	685	31 percent
<b>Church attendance</b>		
<i>Weekly</i>	588	22 percent
<i>Monthly</i>	309	13 percent
<i>Yearly</i>	520	20 percent
<i>Never/Less than Once a Year</i>	958	44 percent
<b>Political affiliation</b>		
<i>Republican</i>	713	24 percent
<i>Democrat</i>	713	30 percent
<i>Other</i>	775	39 percent
<i>No Party</i>	174	7 percent
<b>Abortion identity label</b>		
<i>Pro-life</i>	653	32 percent
<i>Pro-choice</i>	1031	42 percent
<i>Equally Both Pro-choice and Pro-Life</i>	409	16 percent
<i>Neither/No Preference</i>	282	11 percent
<b>General Social Survey (GSS) scenario summed scores</b>		
<i>GSS Wording</i>	3.52 [3.44–3.60]	1.98
<i>6 Weeks Wording</i>	3.61 [3.52–3.69]	2.14
<i>12 Weeks Wording</i>	3.10 [3.01–3.18]	2.11
<i>20 Weeks Wording</i>	2.49 [2.41–2.57]	1.99
<i>Any Time Wording</i>	2.55 [2.47–2.63]	1.92

## RESULTS

Across all scenarios, participants more frequently indicated that abortion should be legal at earlier weeks' gestation. Abortion in the case of a fetal defect, women's health endangerment, and rape garnered more support across all time points than the other scenarios. The average weighted summed scores for the GSS items were between 2.49 and 3.61, with greater support early in pregnancy. The average score indicates support in at least half of the circumstances for every time point before 20 weeks. See Table 2 for the results from the five OLS regression models predicting abortion summed scores for the different versions of the questions. The  $R^2$  values range from 0.32 to 0.55. As weeks' gestation increases, the amount of variance the model explains decreases. Below, we only discuss significant coefficients. When considering significant differences in scores, a predicted change of  $\pm 0.5$  in the summed scores can be thought of as the difference of answering "do not know" for one question instead of "yes" or "no." A difference of  $\pm 1$  is the equivalent of changing from "yes" to "no" (or vice versa) for one question or answering "do not know" instead of "yes" or "no" for two questions.

For ethnicity, the summed scores of participants who identified as Hispanic were 0.38–0.62 points lower than those who did not identify as Hispanic in the GSS, 12 Weeks, and Any Time models. The summed scores of women are 0.27–0.35 points lower than the summed scores for men in the 12 Weeks, 20 Weeks, and Any Time models. In the GSS, 6 Weeks, and 12 Weeks models, increases in age are associated with higher summed scores. However, the practical significance is low, with a 50-year increase in age only associated with a 0.5 increase in summed scores.

For the GSS, 6 Weeks, 12 Weeks, and 20 Weeks models, the summed scores for participants with a graduate degree are significantly higher (0.48–0.82) than the scores of those with a high school degree or less. In the GSS, 6 Weeks, and 12 Weeks models, the summed scores for those with a bachelor's degree are significantly higher (0.32–0.44) than those with a high school degree or less. Across all five models, the summed scores for those who indicated the Bible was not the word of God are 0.61–0.82 points higher than those who said the Bible was the literal word of God. Scores for participants who indicated that the Bible was the word of God but not to be taken literally are higher (0.41–0.53) in the GSS and 6 Weeks models than scores for those who indicated the Bible is the literal word of God. In all five models, the summed scores of those who indicated they attended church less than once a year are higher (0.53–0.72) than the scores of those who indicated they attended church weekly. The summed scores for those who indicated attending church yearly are also significantly higher (0.44–0.48) than those who attended weekly but only in the 6 Weeks and 12 Weeks Models.

The only significant differences for political affiliation are in the 6 Weeks and Any Time models. For those models, scores for democrats are 0.73–0.83 points higher than summed scores for Republicans. The largest differences in summed scores are between abortion identity labels. Overall, the scores of those who identified as pro-choice (2.87–1.75), equally both pro-choice and pro-life (1.67–0.93), and neither (1.25–0.84) are significantly higher than the scores of those who identified as pro-life. Figure 1 in the Online Appendix shows the marginal predictions for abortion identity labels across the five models. The margins show that for every group, the summed scores tend to be lower later in pregnancy. We see the largest drop-off among pro-choice participants and the smallest drop-off among pro-life participants. Also, for every group except pro-choice, the Any Time scores are slightly higher than the 20 weeks scores.

## DISCUSSION

We examined people's attitudes toward abortion and demographic correlates associated with these attitudes by summing responses from the six scenario-specific core abortion items from the GSS. In addition to asking about the original GSS format, which does not include weeks' gestation, we also appended various gestational time points to the six GSS items. This allowed us to assess the extent that gestational timing influences abortion attitudes. This analysis is timely and important given recent legislative efforts



TABLE 2 OLS regression of GSS sum scores at different week gestations and any time

	GSS		6 Weeks		12 Weeks		20 Weeks		Any time	
	b	S.E.	b	S.E.	b	S.E.	b	S.E.	b	S.E.
Women (ref = men)	-0.08	0.12	-0.02	0.133	-0.27*	0.128	-0.35*	0.138	-	0.138
<b>Race/ethnicity (ref = white)</b>										
<i>Black or African American</i>	-0.47	0.295	-0.59	0.305	-0.35	0.373	-0.03	0.351	-0.38	0.381
<i>Other</i>	0.15	0.304	-0.15	0.326	0.28	0.393	0.27	0.433	0.25	0.417
<b>Ethnicity (ref = not Hispanic)</b>										
<i>Hispanic</i>	-0.38*	0.191	-0.21	0.223	-0.62**	0.229	-0.50	0.342	-0.62*	0.256
<i>Age</i>	0.01**	0.004	0.01**	0.004	0.01**	0.004	0.00	0.005	0.00	0.004
<b>Education (ref = less than HS)</b>										
<i>Some College/ Associates</i>	0.04	0.132	0.03	0.15	0.06	0.146	0.07	0.153	-0.22	0.149
<i>Bachelors</i>	0.32*	0.156	0.34*	0.17	0.44*	0.173	0.35	0.19	-0.05	0.188
<i>Masters or Higher</i>	0.58**	0.184	0.48*	0.203	0.56**	0.196	0.82***	0.225	0.13	0.228
<b>Bible literalism (ref = literal word of God)</b>										
<i>Word of God, not literal</i>	0.53***	0.152	0.41*	0.169	0.29	0.157	0.27	0.161	0.25	0.157
<i>Not the Word of God</i>	0.82***	0.177	0.77***	0.2	0.82***	0.188	0.74***	0.205	0.61**	0.206
<b>Church attendance (ref = weekly)</b>										
<i>Monthly</i>	0.12	0.177	0.33	0.177	0.29	0.192	0.14	0.209	0.09	0.208
<i>Yearly</i>	0.35	0.184	0.48*	0.21	0.44*	0.197	0.32	0.195	0.22	0.202
<i>Never/ Less than Once a Year</i>	0.55**	0.172	0.72***	0.181	0.66***	0.189	0.53**	0.2	0.67***	0.196

(Continues)

TABLE 2 (Continued)

	GSS		6 Weeks		12 Weeks		20 Weeks		Any time	
	b	S.E.	b	S.E.	b	S.E.	b	S.E.	b	S.E.
<b>Political affiliation (ref = Republican)</b>										
<i>Democrat</i>	0.59	0.305	0.73*	0.331	0.74	0.401	0.34	0.345	0.83*	0.383
<i>Independent/Other</i>	0.06	0.147	0.13	0.177	0.18	0.158	0.18	0.156	0.11	0.159
<i>No Party</i>	−0.35	0.237	−0.25	0.275	−0.18	0.257	−0.45	0.261	−0.19	0.265
<i>Correct Length of Pregnancy</i>	0.27	0.174	0.31	0.188	0.40*	0.169	0.23	0.188	0.08	0.178
<b>Abortion identity (ref = pro-life)</b>										
Pro-choice	2.73***	0.153	2.87***	0.168	2.65***	0.163	2.00***	0.164	1.75***	0.171
Equally Both	1.56***	0.169	1.67***	0.191	1.16***	0.179	0.93***	0.185	0.93***	0.185
Neither	1.11***	0.228	1.25***	0.254	0.89***	0.267	0.85***	0.246	0.84***	0.248
<i>R</i> <sup>2</sup>	0.546		0.51		0.494		0.354		0.319	

\**p* < .05, \*\**p* < .01, \*\*\**p* < .001.



in the United States aimed at limiting abortion at specific time periods outside of the trimester framework established in *Roe v. Wade*.

Notably, in September 2021, despite conflicting with the precedent established in *Roe*, Texas enacted a law that restricts abortion after about 6 weeks—or at the point that cardiac activity can be detected in an embryo, which some consider a “fetal heartbeat” (Whole Woman’s Health v. Jackson 2021). The Supreme Court refused to preemptively block the law from going into effect due to how the law was written and enforced (Rabin 2021). Additionally, in 2022, the Supreme Court will rule on *Dobbs v. Jackson Women’s Health Organization*, a 2018 Mississippi law that bans abortion after 15 weeks (Kaiser Family Foundation 2020). If either law is upheld by the Supreme Court, it would mark a substantial change, likely resulting in increased abortion legislation based on even earlier weeks’ gestation than the initial ruling in *Roe*. As such, there is a timely and pressing need to understand U.S. adults’ abortion attitudes at different weeks’ gestation.

Consistent with previous research, we found that people were generally more supportive of abortion at earlier weeks’ gestation than later in pregnancy, disregarding the six GSS circumstances (e.g., Bumpass 1997; Saad 2018). That is, across all six circumstances we evaluated, participants endorsed legal abortion at 6 and 12 weeks more frequently than at 20 weeks and any time during the pregnancy. Higher levels of support for legal abortion at 6 and 12 weeks than at 20 weeks and any time during pregnancy suggest that gestational time is an important context that influences attitudes.

However, we also found variability in support across the GSS circumstances at different weeks’ gestation. Consistent with previous research (Jozkowski, Crawford, and Hunt 2018; Smith and Son 2013), more participants indicated that a woman should have access to legal abortion if the pregnancy was a result of rape, if the woman’s own health was seriously endangered, or if there are severe fetal anomalies, compared with the other three circumstances—not wanting any more children, financial reasons, and being unmarried. But some circumstances, even at the later weeks’ gestation, garnered more support than other circumstances at the earliest time points. For example, approximately 50 percent of the sample indicated that a woman should be able to obtain a legal abortion at 20 weeks or any time during the pregnancy when there is a strong chance of fetal anomalies, whereas approximately 42 percent endorsed legal abortion at 6 weeks if the abortion is sought because of low income.

Similar to other polls, large percentages of people supported abortion in certain circumstances and at earlier points in the pregnancy (e.g., 6 weeks; 12 weeks), suggesting that proposals of outright bans on abortion in the United States may be out of step with most people’s attitudes. However, we did not find broad support for abortion for the duration of a pregnancy. Overall, support for abortion decreased over time, with support for some circumstances at later weeks’ gestation being particularly low. Collectively, these findings suggest that support for abortion varied as a function of both gestational time and circumstance, indicating the potential importance of both timing and context on abortion attitudes.

In general, research examining the reasons people have abortions during more advanced gestational time points is limited. Nevertheless, people tend to seek later abortions for specific reasons, such as fetal disability and the health of the pregnant person, or due to specific circumstances, such as individual and institutional barriers to receiving care (Foster and Kimport 2013; Kaiser Family Foundation 2019). The former reasons align with circumstances that people tend to find more acceptable, suggesting that outright bans on abortion, even later abortion, without exception, do not seem to align with people’s attitudes.

The decision in *Roe v. Wade* stipulated that different state-level regulations could be enacted according to trimester (U.S. Reports: *Roe v. Wade* 1973). Indeed, according to *Roe v. Wade*, in the first trimester (i.e., approximately the first 12 weeks of pregnancy), decisions regarding abortion are left to the pregnant person and the health-care provider, ostensibly free of regulation. States are permitted to regulate abortion in the second and third trimesters and prohibit abortion at the point of fetal viability in the third trimester if there are exceptions when pregnancy may threaten the pregnant person’s life. Although we did not assess people’s attitudes at the same weeks’ gestation as specified in *Roe v. Wade*, our findings suggest that people’s attitudes toward abortion in relation to gestational timing, to some extent, align with the trimester precedent established in this Supreme Court decision. That is, there was more support for early abortion independent of circumstance and far less support for later abortion in general, with the exception of certain

situations, such as life endangerment. Our findings seem consistent with research indicating that people are generally in favor of upholding the decision in *Roe v. Wade* (Bowman and Sims 2017; Jozkowski et al. 2020). However, it is unclear whether people's attitudes align with the decision in *Roe v. Wade* or whether the decision itself was made to align with people's attitudes.

Interestingly, we also found that people's endorsement of abortion at 6 and 12 weeks' gestation is the most similar across circumstances to the items that did not specify gestational time (i.e., the wording from the GSS items). This finding could suggest that when people respond to abortion attitude items without gestational timing specified as a context, they are thinking about abortions earlier in pregnancy. As most abortions in the United States tend to happen early in pregnancy (e.g., prior to 12 weeks), people considering early abortion when responding to such items may represent an accurate portrayal of people's attitudes toward "typical abortion" (Guttmacher Institute 2016b; Watson 2018); however, applying those rates to later abortion may inflate support. As such, specifying weeks' gestation when assessing abortion attitudes may help increase precision.

Of note, we found that people's support for abortion across two circumstances (i.e., fetal anomaly; rape) was higher at any time during pregnancy than at 20 weeks. This is surprising, as we anticipated that if someone supports abortion any time during pregnancy, that would be inclusive of 20 weeks. These differences were very slight, however, so we do not mean to overstate their relevance. We recommend continued investigation aimed at examining how people interpret "any time" during a pregnancy given potential measurement implications.

We also examined socio-demographic correlates associated with abortion attitudes across gestational time periods and found predictors to be relatively consistent disregarding weeks' gestation. However, there was some variation across ethnicity, gender, and political affiliation. Of note, Democrats were only more supportive than Republicans at 6 weeks and any time. Such findings suggest that different contexts, like weeks' gestation, may hold more relevance for certain subgroups in terms of influencing their attitudes toward abortion. This information could be useful for activists in terms of determining ways to target the mobilization of specific subgroups toward their cause.

It is also worth noting that the amount of variance explained in each of the five abortion attitude regression models ranged substantially from 32 percent to 55 percent. Our predictors explained more variance in abortion attitudes when we did not specify a gestational time point and at earlier gestational time points, compared with later gestational time periods. In fact, there was a steady decline in variance explained, with the items that did not indicate weeks' gestation having the best model fit followed by 6 weeks, 12 weeks, 20 weeks, and then any time. This may suggest that the common correlates of abortion attitudes—those that were included in our model—may not be as effective in predicting attitudes toward later abortion or that such differences simply do not matter because people generally trend toward being less supportive as weeks' gestation increases. Researchers may consider further examination of the extent that weeks' gestation may influence specific demographic subgroups' attitudes toward abortion and identify additional correlates that better explain abortion attitudes later in pregnancy.

Finally, the patterns associated with the items asking about any time are perplexing. For instance, we found that support for abortion in two circumstances (i.e., fetal anomaly; rape) was higher at any time during the pregnancy than at 20 weeks. People who identified as pro-life, neither pro-life nor pro-choice, or both, had slightly higher endorsement of any time during the pregnancy than at 20 weeks. Although the differences were small, this finding is surprising, as we anticipated that supporting abortion any time during pregnancy would be inclusive of 20 weeks. It is unclear what to make of these findings, but we propose some potential explanations.

These differences may be the result of low effort responding. That is, someone may endorse abortion at any time without fully thinking through what "any time" means. Then, when prompted to specifically think about 20 weeks, some participants may not be supportive and respond "no." Relatedly, it is also possible that those who are potentially less extreme in their position may be less engaged in a survey about abortion than those who hold more extreme positions and thus be more likely to indicate this inconsistent response pattern. Also, when thinking about "any time," participants may be thinking about the commonly used

frameworks of first- and second-trimester abortions. Continued research assessing people's interpretation of "any time" may be fruitful.

## STRENGTHS, LIMITATIONS, AND FUTURE RESEARCH

This study has important strengths and limitations worth noting. First, by using a quota-based sampling design, our sample was diverse with respect to race/ethnicity, age, educational attainment, and political affiliation. By employing this recruitment strategy, coupled with our large sample size, we were adequately powered to conduct regression analyses using several socio-demographic variables as predictors and make sub-group comparisons that are typically lacking in other studies (e.g., comparing across different racial/ethnic groups as opposed to comparing white vs. other). However, the use of a quota sample limits the generalizability of our findings. Further, our sample was limited to those who took the survey on the web, adding another distinct difference when compared with the general population of the United States. The weighting of the data may help some with generalizability, but in the future, researchers may consider replicating our findings with a nationally representative sample.

Although we use the exact wording of the GSS questions, differences in mode limit the extent that our results can be compared with the GSS. Our survey was administered exclusively on the web, while the GSS was administered primarily face-to-face or, in some instances, over the phone. When administering the survey face-to-face or via telephone, participants are only provided with response options of yes or no, and participants must opt into saying they "do not know." Alternatively, on our web-administered survey, "do not know" was listed as a response option. As such, we have a higher endorsement of "do not know" across all abortion scenarios when compared with actual GSS data.

Additionally, people's knowledge regarding pregnancy, abortion, and reproductive health more generally may influence abortion attitudes, particularly when asking about weeks' gestation. We only assessed the extent that people knew the typical length of a pregnancy. Researchers could include more in-depth assessments of pregnancy, abortion, and reproductive health knowledge. Although providing knowledge may influence attitudes, if one is interested in population estimates, this may increase error if people are largely uninformed about reproductive health issues. It is worth considering whether people's attitudes disregarding knowledge are more meaningful and "accurate" than assessing attitudes after having provided people with information about a particular issue of interest.

## CONCLUSION

There are several factors to consider when measuring abortion attitudes, one of which may be weeks' gestation. Our findings suggest that overall, weeks' gestation influences people's support for legal abortion in that people are more supportive earlier in pregnancy than later. However, our findings also reveal that patterns of predictors of abortion attitudes remain relatively consistent across weeks' gestation and when compared with abortion attitude items that do not include reference to gestational time. We argue that the inclusion of weeks' gestation may yield more precise assessments of people's attitudes, but when looking to compare sub-group differences in attitudes, such precision may be unnecessary. As such, we recommend that researchers carefully consider the goal of their data collection when deciding whether to include gestational time points and consider more thoroughly investigating the extent that weeks' gestation influences abortion attitudes across different contexts.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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