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Allison Leip

University of Kentucky, allison.leip@uky.edu

Author ORCID Identifier:

 <https://orcid.org/0000-0002-6582-8277>

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Allison Leip, Student

Jason Hans, PhD, CFLE, Major Professor

Alexander Vazsonyi, PhD, Director of Graduate Studies

MALLEABILITY OF ABORTION ATTITUDES

THESIS

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Family Sciences in the College of Agriculture, Food and Environment at the University of Kentucky

By

Allison Leip

Lexington, Kentucky

Director: Jason Hans, PhD, CFLE, Professor of Family Sciences

Lexington, Kentucky

2024

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<https://orcid.org/0000-0002-6582-8277>

ABSTRACT OF THESIS

MALLEABILITY OF ABORTION ATTITUDES

Although abortion attitudes have been thoroughly investigated and population-level attitudes have not changed much over the past half-century, polls and research inquiring about abortion attitudes tend to ask isolated questions about if, and in what circumstances, abortion should be legal. The purpose of this study was to examine the extent to which abortion attitudes both varied and changed according to several contextual factors. A multiple-segment factorial vignette was conducted with 530 respondents in the state of Kentucky. Overall, most respondents held strong attitudes on access to abortion, both before the rationale was provided and regardless of the rationale provided. However, attitudes tended to soften or change as more context is provided, specifically for those respondents who were initially unsupportive of abortion access and heard that the pregnancy was a result of rape. Additionally, for those who opposed abortion access, parental support for a minor wanting to abort seemed to particularly influential in softening or flipping attitudes. More nuanced approaches are needed for opinion polling and attitudinal research that take into account context.

KEYWORDS: attitudes, abortion attitudes, abortion, malleability

Allison Leip

(Name of Student)

04/18/2024

Date

MALLEABILITY OF ABORTION ATTITUDES

By
Allison Leip

Dr. Jason Hans
Director of Thesis

Dr. Alexander Vazsonyi
Director of Graduate Studies

04/18/2024
Date

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CHAPTER 1. STUDY BACKGROUND

1.1 Introduction

In 2022, the U.S. Supreme Court overturned constitutional protection for access to induced abortion¹ that had been afforded by *Roe v. Wade* in 1973 (*Dobbs v. Jackson Women's Health Organization*), leaving abortion laws and access up to each state. There are currently 21 states that have bans or restrictions on abortion in effect, with several other state legislatures considering bills that would ban or further restrict abortion access (The New York Times, 2024). The sociocultural impact of this decision is yet to be known; however, public attitude pertaining to whether abortion should be legal has not changed much over the last 50 years (Jones, 2018).

Strongly held attitudes concerning abortion access are often responsive to the contextual circumstances for why an abortion is being sought such as maternal health risk or a fetal abnormality (Hans & Kimberly, 2014). However, most survey research designs employed to assess attitudes toward abortion access are unable to identify the extent to which the stated attitudes are shaped by circumstance (Adamczyk et al., 2020). Hans and Kimberly (2014) is an exception; they used a multiple-segment factorial vignette approach designed to measure changes in abortion attitudes based on hypothetical situations. This design allows for examination of the impact of various contextual factors such as relationship status, reason for considering abortion, and male partner's desires on attitudes toward abortion. They found that (a) many respondents initially reported strong attitudes toward abortion when provided with scant information regarding the

¹ Throughout this manuscript, "abortion" refers to induced abortion, even when the adjective is omitted.

hypothetical situation, and (b) many of those respondents changed their initial response regarding abortion access as additional details related to the situation were revealed across vignette segments.

In the present study, Hans and Kimberly's (2014) multiple-segment factorial vignette design will be used to assess the extent to which abortion attitudes vary according to additional relevant contextual factors. In particular, the woman's developmental age, educational attainment goals, lack of desire to have children at the present time, infidelity, rape, and her husband or parents' disposition concerning her potential abortion will be examined. Prior to presenting the method, I provide an overview of the conceptual framework, common reasons women seek abortion, and current research regarding attitudes toward abortion.

1.2 Conceptual Framework

The tripartite model of attitudes (Rosenberg, 1960) postulates that attitudes on a given attitude object (AO) are shaped by affective, behavioral, and cognitive components. An attitude toward any AO is said to be in a stable state when feelings, thoughts, and behaviors concerning the AO align. In contrast, if these components are discordant (e.g., positive thoughts but negative feelings toward an AO), then one's attitude toward the AO can be inconsistent. Attitude research has found that the stability of an attitude also varies based on the degree to which an attitude is influential in shaping cognition and behavior across situations (Howe & Krosnick, 2017). Highly influential attitudes are "resistant to change, stable over time, influential on cognition, and influential on action" (Petty & Krosnick, 1995).

The tripartite model of attitudes combined with a life course perspective provide a framework to better understand the assessment of abortion attitudes and abortion attitude malleability when framed by context. Previous research looking at abortion attitudes across the life course suggests that the formation and evolution of an attitude occurs through experience, as abortion attitudes later in life tend to be consistent with the individual's life course experiences, as well as the life course experiences of their children (Poortman & van Tilburg, 2005). For example, certain life experience may reinforce an individual's attitude, or challenge an existing attitude, until congruence between the attitude and behavior is realized. A life course perspective can provide insight into how common life transitions, relationships, social change, and chronological age shape an individual's life story. Often, life stories are intricate, reflecting the complexities of people and situations. Although research on attitudes often fails to capture these complexities, some research designs, such as multiple-segment factorial vignettes, are better suited than other research designs for evaluating those complexities.

1.3 Literature Review

1.3.1 Induced Abortion

Women typically report seeking abortion for more than one reason, including but not limited to socioeconomic circumstances, timing of pregnancy vis-à-vis one's life stage, relationship status or concerns, and the presence of (e.g., obligations to) existing children (Biggs et al., 2013). Perhaps most notably, Biggs et al. also found that financial reasons were the most common reason women reported for considering an abortion. Although the cost of having and raising a child varies by family circumstances and geographic area, Lino et al. (2017) estimated that the cost of raising a child was over

\$9,000 per year in 2015, which is nearly \$12,000 per year in 2024 inflation-adjusted dollars. In addition to the cost per year of raising a child, there are health care costs associated with prenatal visits, birth, postpartum supplies, and recovery, as well as opportunity costs associated with one's hourly wage and/or career trajectory. Often referred to as the "motherhood penalty," compared to their childfree peers, women with children are less likely to be in the paid labor force, more likely to have lower wages, and more likely to have lower occupational prestige (Kahn et al., 2014). These effects are strongest for women younger than 40 years of age and for women with more than two children.

The timing of a pregnancy relative to the context of one's life has also been reported as a common reason women consider abortion, whether due to current life circumstances or chronological age (i.e., being either being too young or too old; Biggs et al., 2013). Women who report the current circumstances of their relationship with the prospective father as a reason for seeking an abortion often reference the quality of the relationship, perceived lack of support, or character flaws of the prospective father (Chibber et al., 2014). Among some women who already have children, additional concerns that can lead to having an abortion include compounding stress on limited family resources or potential detrimental impacts on existing children (Biggs et al., 2013).

In addition to the aforementioned reasons that women report having an abortion, some women also report having an abortion for rape-related pregnancies (RRPs). The Centers for Disease Control (Basile et al., 2018) estimates that over 3 million women in the United States have experienced a RRP during their lifetime, yet it is estimated that

only 21.4% of rapes are reported to officials, primarily due to knowing the perpetrator, not wanting to get the perpetrator in trouble, and fear that police would be insensitive or blame the victim (Jones et al., 2009; Thompson & Tapp, 2023). Although rapes by known perpetrators are less likely to be reported, they happen more frequently and are more likely to result in a pregnancy. Women who report being raped by a known perpetrator (intimate partner or acquaintance) were more likely (31.4%) to experience a RRP than those who report being raped by a stranger (6.9%; Basile et al., 2018).

Undoubtedly, the decision to terminate a pregnancy is informed by a complex array of circumstances that are difficult to capture in a traditional survey designed to measure attitudes toward abortion. The present study was therefore designed to capture some of that complexity while assessing attitudes toward abortion.

1.3.2 Rationale for Abortion

An individual's attitude toward abortion may depend on the life stage of the individual seeking an abortion. From a life course perspective, teens experiencing pregnancy and motherhood have the added challenge of navigating these experiences along with the developmental tasks associated with adolescence, increasing their risk of adverse mental health outcomes, which could influence the development of their offspring and home environment (Tebb & Brindis, 2022). A teen mother's level of social support, perception of the pregnancy, and level of father involvement can also influence the risk of postpartum depression, which has been estimated to be between 16% and 44% for pregnant adolescents (Meltzer-Brody et al., 2013; Szigethy & Ruiz, 2001). Furthermore, teen parenthood is associated with lower educational attainment for both

mother and father, which can further impact employment opportunities and income throughout one's life (Johansen et al., 2020).

Additionally, one's attitude toward abortion might also be responsive to pregnancies among women who are at a chronological age associated with a heightened risk for complications for themselves and their offspring. Women over 35 years of age are considered to be at an advanced maternal age and are at a heightened risk for conditions such as gestational diabetes, high blood pressure, pregnancy loss, stillbirth, and premature birth; their offspring are at an increased risk for low birth weight, complicated medical issues, and genetic defects (Laopaiboon et al., 2014). Americans are generally supportive of abortion if the mother's life is in danger or the fetus has a serious genetic defect (Bane et al., 2003). Bane et al. also reported that Americans are relatively supportive if the family cannot afford more children.

One's attitude toward abortion could also be responsive when learning that a pregnancy is the result of an extramarital affair. Sexual infidelity is usually kept a secret; however, pregnancy could provide evidence that would reveal this affair. To save their primary relationship and/or reputation, an individual might seek to obtain an abortion. Some individuals may believe that it is not the existing committed partner's responsibility to raise and provide for another person's child, supporting an abortion or the termination of the relationship. Statistically, men are more likely to end the relationship when learning about their female partner's sexual infidelity (Shackelford et al., 2002).

Although rape is a rare reason for abortion—survey reports since 1987 have indicated that less than 1.0% of women reported rape as a reason for obtaining an abortion and less than 0.5% reported incest as a reason for obtaining an abortion (Finer et

al., 2005)—Americans have long been overwhelmingly supportive (~80%) of access to abortion for women experiencing a RRP (Bane et al., 2003). In fact, more than a third of those who report opposing abortion in general nonetheless believe that it should be legal for pregnancies resulting from rape (Pew Research Center, 2022). That said, surveys typically ask about “rape” in the abstract, without specifying the nature of the victim–perpetrator relationship, so it remains unclear whether attitudes are different depending on whether the perpetrator was a family member (i.e., incest), an acquaintance, or a stranger. Regardless of the victim–perpetrator relationship, RRP is almost certainly underreported due to a number of psychosocial factors. For example, cases of RRP stemming from incest are believed to most commonly impact adolescent females, who tend to delay reporting and/or seeking care for RRP or accessing abortion longer than those experiencing RRP due to rape by a stranger (Bessa et al., 2019), likely due to power dynamics, a lack of self-efficacy, conflicted loyalties, and the like. Similarly, there is a clear distinction in the literature regarding instances of acquaintance versus stranger rape: Rape victims are more often blamed when raped by an acquaintance than by a stranger (Persson & Dhingra, 2022).

H1: Individuals are generally less supportive of access to abortion when sought by a 24-year-old than by a 16- or 45-year-old.

H2: Among those who are generally supportive to women having access to abortion, attitudes tend to be more supportive upon learning that she is seeking an abortion to meet her educational goals than not wanting children now or due to pregnancy stemming from infidelity.

H3: Among those who are generally opposed to women having access to abortion, attitudes tend to be more supportive upon learning that the pregnancy was the result of rape by a family member than by a stranger, and by a stranger than by an acquaintance.

H4: Among those who are generally supportive to women having access to abortion, attitudes tend to be less supportive upon learning that she is seeking to have an abortion due to a personal rationale (i.e., educational goals, does not want children, infidelity).

H5: Among those who are generally opposed to women having access to abortion, attitudes tend to be more supportive upon learning that the pregnancy was the result of rape.

1.3.3 Partner or Parental Support

Pew Research Center (2022) found that most Americans (72%) agree that the decision to have an abortion should rest solely with the pregnant woman. Even among individuals who are generally opposed to abortion, 41% agreed that the decision should be up to the pregnant woman. Regardless, many—and especially those who are generally opposed to abortion—also believe male partners should be involved in abortion decisions (Coleman & Nelson, 1999), and young men tend to believe that they should have a great deal of influence in the decision if the unplanned pregnancy occurs in the context of a longer-term relationship or if they were going to be held financially responsible (Sharp et al., 2014).

For those under 18 years of age, most states require some form of parental involvement in the decision to terminate a pregnancy (Guttmacher Institute, 2023). Parental consent laws tend to be supported by men slightly more than by women (Saad, 2006), but most American men and women alike support these policies (Sadd, 2005). That said, parental involvement aside, teen pregnancy is continually framed as a social issue that is detrimental to young women, their children, and society (Barker et al., 2019).

H6: Those who are generally supportive of women having access to abortion are not swayed by a husband's lack of support but tend to be less supportive upon learning that a 16-year-old's parents are not supportive of her desire to obtain an abortion.

H7: Those who are generally not supportive of women having access to abortion are not swayed by a husband's support but tend to be more supportive upon learning that a 16-year-old's parents are supportive of her desire to obtain an abortion.

1.3.4 Demographic Characteristics

The malleability of abortion attitudes of some contextual factors likely varies by a person's demographic characteristics. An abundance of previous research has looked at demographic characteristics as predictors of abortion attitudes, but Jozkowski et al. (2018) uniquely evaluated abortion attitude complexity (i.e., the degree to which attitudes vary across circumstances). They found that abortion attitude complexity was associated with education, religious affiliation, geographic classification (urban vs. rural), and political affiliation. Specifically, those who lived in a rural area or identified with more conservative religious and political ideologies tended to be less supportive of access to

abortion to also had higher levels of abortion attitude complexity than their respective counterparts. With regard to education, attitude complexity increased with education through high school, then decreased with each additional year of education.

More generally, those with higher levels of education tend to be more supportive of abortion access (Dutta et al., 2021), women—especially those who had or sought an abortion themselves (Woodruff et al., 2018)—tend to have more supportive attitudes toward abortion than men (Loll & Hall, 2019), and those without children tend to report more supportive views regarding abortion access than those with children (Elder & Greene, 2016). Differences among parents are larger in younger cohorts; the gap tends to be smaller and overall attitudes less favorable with age (Osborne et al., 2022).

In the breadth of research evaluating religiosity and religious preference/affiliation, religious involvement has been found to be associated with opposition to abortion access (Hess & Rueb, 2005). However, there is variability in abortion attitudes across and within religions. For example, Catholics and Protestants tend to be less supportive of abortion access than other denominations and non-religious individuals (Osborne et al., 2022). Pew Research Center found in their 2014 Religious Landscape Study that Mainline Protestants were more likely to believe that abortion should be legal in all or most cases than Catholics and Evangelical Protestants (Masci, 2018).

Although not the central focus of this study, respondent characteristics will be included in the analyses as they have been determined by previous research to be predictors of abortion attitudes. Specifically, respondent's sex, parent status, rural/urban classification, education, religious identity, and religious preference will be considered.

CHAPTER 2. METHOD

A multiple-segment factorial vignette (MSFV; Ganong & Coleman, 2006) was designed to examine how contextual circumstances affect attitudes toward induced abortion. As outlined by Ganong and Coleman, MSFVs are useful for examining complex issues, such as abortion, because they allow researchers to manipulate variables and evaluate the influence of each contextual dimension.

2.1 Participants

Data for this study was collected in 2009 using random-digit dialing. Trained, female research assistants at the University of Kentucky contacted potential respondents across the state of Kentucky. Each telephone number included in the sampling frame was contacted up to 10 times. Refusal conversions were attempted with any respondent who initially refused the survey. To reduce within-household sampling bias, the youngest or oldest adult male or female living in the household was randomly selected to complete the survey.

The sample consisted of 530 respondents. Most respondents were female (65.3%) and White (91.2%). The age of respondents ranged from 18 to 86 ($M = 49.0$, $SD = 16.1$) and reported median household income was between \$50,000 and \$70,000. Nearly 10% of the sample reported having less than a high school education, 30.5% reported having a high school diploma (or equivalent), 25.2% reported having completed at least some college, 17.1% reported having a bachelor's degree, and 16.4% reported having some level of graduate or professional schooling. Most respondents were married (58.6%) and had at least one child (80.0%). Respondents identified as being 15.3% Mainline

Protestant, 61.0% Evangelical Protestant, 12.7% Catholic, 9.9% no religious preference and 1.0% other. Most respondents reported identifying very strongly (53.7%) or somewhat strongly (30.0%) with their religion.

2.2 Procedures

In this study, the procedures varied slightly from those originally outlined by Ganong and Coleman (2006) in that the factors randomly assigned following the first segment were conditioned based on each participant's response to the previous segment. This adjustment allowed for the testing of the relative weight given to the factors that would challenge the respondent's previously stated attitude. Figure 2.1 shows the sequencing, randomization, and number of respondents who were exposed to each of the scenarios.

2.2.1 Segment 1

The first vignette segment indicated that a pregnant woman was one of three randomly selected ages and considering an abortion. Respondents heard the following (independent variable is italicized): "Vanessa, a *16-year-old/24-year-old/45-year-old*, is pregnant and is considering having an abortion." Respondents were then asked two questions: (1) "Based only on this information, do you think that abortion *should* or *should not* be an option available to Vanessa?" and (2) "How strongly do you feel that abortion should/should not be an option available to Vanessa: Would you say *very strongly, somewhat strongly, or not very strongly*?" Then respondents were prompted to explain in their own words why they selected their answers.

2.2.2 Segment 2

For Segment 2, those who indicated after the first segment that abortion should not be an option available to Vanessa heard: “It turns out that Vanessa does not want to continue the pregnancy because she had become pregnant after being raped by *a family member/a stranger/an acquaintance.*” Conversely, those who indicated after the first segment that abortion should be an option for Vanessa were prompted with one of two randomly selected scenarios; either (a) “It turns out that Vanessa does not want to continue the pregnancy because it will interfere with her educational goals—she recently returned to college full-time [or, if Vanessa was 16 years of age, *after completing high school she wants to go to college*],” (b) “It turns out that Vanessa does not want to continue the pregnancy because she simply does not want children at this point in her life” or (c) “It turns out that Vanessa does not want to continue the pregnancy because she became pregnant while cheating on her partner.”

After Segment 2 was presented, respondents were asked again “Given this new information, do you think that abortion *should* or *should not* be an option available to Vanessa?” and “How strongly do you feel that abortion should/should not be an option available to Vanessa: Would you say *very strongly*, *somewhat strongly*, or *not very strongly*?” Then respondents were prompted to explain in their own words why they selected their answers.

2.2.3 Segment 3

The third and final segment revealed that Vanessa had decided to have an abortion and indicated whether her husband/parents were supportive/not supportive of her decision. Those who indicated in the second segment that they did not think abortion

should be an option available to Vanessa were prompted with the following information: “Upon telling her husband [or, if Vanessa was 16 years of age, parents] that she wants to have an abortion, Vanessa learns that he is/they are *supportive* of her decision given the circumstances.” Those who had indicated after Segment 2 that Vanessa should have access to abortion heard: “Upon telling her husband [or, if Vanessa was 16 years of age, parents] that she wants to have an abortion, Vanessa learns that he is/they are *not supportive* of her decision because he is/they are opposed to abortion despite the circumstances.”

After Segment 3 was presented, respondents were asked one final time: “Given this new information, do you think that abortion *should* or *should not* be an option available to Vanessa?” and “How strongly do you feel that abortion should/should not be an option available to Vanessa: Would you say *very strongly*, *somewhat strongly*, or *not very strongly*?” In addition to these questions, a third closed-ended question was posed following Segment 3: “How much influence do you think that Vanessa’s husband/parents should have on the decision: Would you say *a great deal*, *a moderate amount*, *a little bit*, or *none at all*?” Then respondents were once again prompted to explain in their own words why they selected their answers.

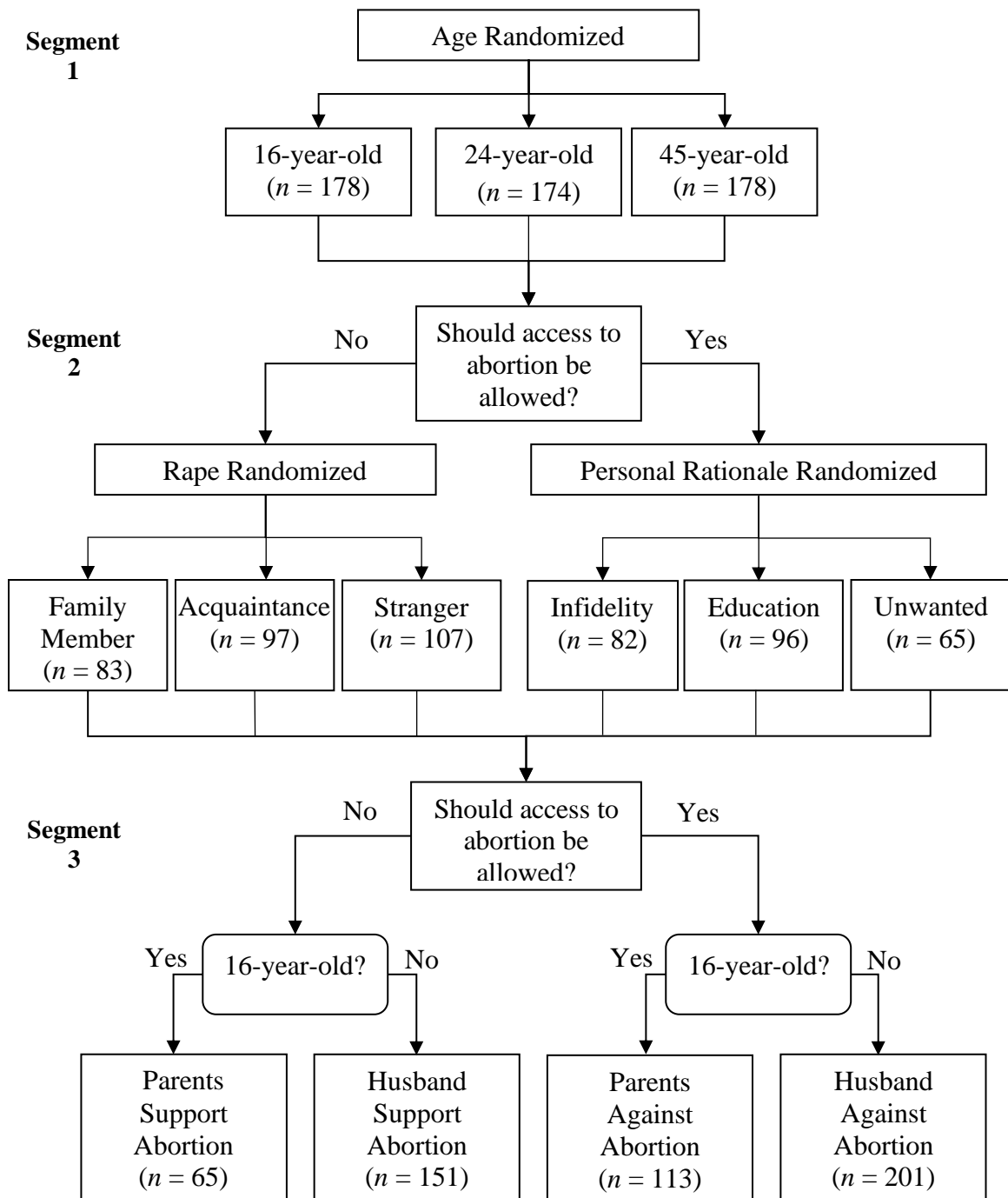
2.3 Analysis

Responses to the first and second questions following each segment were combined to create a 6-point ordinal scale: *very strongly should not* (coded as 1), *somewhat strongly should not* (2), *not very strongly should not* (3), *not very strongly should* (4), *somewhat strongly should* (5), *very strongly should* (6). An a priori power

analysis for ordinal logistic regression using G*Power (Faul et al., 2007)—based on a two-tailed test with an alpha (α) of .05, a beta (β) of .20, an outcome probability of .40, and a medium effect size (odds ratio) of 2.5 (Rosenthal, 1996)—yielded a recommended sample size of 55. Three ordinal logistic regression models were run using SPSS for the first two segments: one ordinal logistic regression for responses following Segment 1 (age), and two for responses following Segment 2 (one for those who heard about rape and another for those who heard about a personal rationale). A cauchit link function was used for the two Segment 2 models due to the distribution of extreme values on the dependent variable (see Norusis, 2011).

Analysis of covariance (ANCOVA) models were run to evaluate the change in abortion attitudes from Segment 1 to Segment 2, and from Segment 2 to Segment 3. An a priori power analysis for ANCOVA with two groups and six covariates using G*Power (Faul et al., 2007)—with an alpha (α) of .05, a beta (β) of .20, and a medium effect size of $f = 0.25$ (Cohen, 1988)—yielded a recommended sample size of 128. The Shapiro-Wilk test indicated that the dependent variables were not normally distributed (in fact, they had a bimodal distribution with the modes at each extreme), but the ANCOVA analyses were conducted anyway, given this test's robustness for performing relatively well under nonnormality (Wilcox, 2005). Regardless, given the nonnormality of these data, the inferential results should be viewed with due caution until replicated using other analytical approaches.

Figure 2.1 Flow chart depicting the sequencing, randomization, and number of respondents who heard each scenario within the multiple-segment factorial vignette.



CHAPTER 3. RESULTS

Bootstrapped bivariate correlations among dichotomous and ordinal covariates (see Table 3.1) were tested using Pearson's correlation coefficients to assess for multicollinearity prior to running ordinal logistic regressions. Results indicated that, compared to male respondents, female respondents were more likely to be parents ($r = .12$, $p = .010$) and tended to identify with their preferred religion more strongly ($r = .13$, $p = .002$). Parents (regardless of sex) also tended to identify more strongly ($r = .17$, $p < .001$) with their preferred religion than did non-parents. Finally, respondents with higher levels of education tended to live in more densely populated areas ($r = -.16$, $p < .001$). Despite these statistically significant correlations, all correlations were quite small in magnitude ($-.16 < r < .17$), quelling any concern about including them all in the subsequent predictive models simultaneously.

Overall, most respondents held strong attitudes on whether Vanessa should have access to abortion, both before the rationale was provided in Segment 2 and regardless of the rationale provided. Table 3.2 provides a breakdown of responses within each of the independent variables manipulated in the vignette. After hearing only Vanessa's age in Segment 1, 54.9% of the respondents indicated that abortion should not be an option available to Vanessa and 45.1% of the respondents indicated that abortion should be an option available to Vanessa. However, many respondents shifted their position—in some cases softened (e.g., very strongly to somewhat strongly or not very strongly) their position and in other cases flipped their position—upon hearing in Segment 2 why Vanessa was considering an abortion.

3.1 Segment 1

Attitudes regarding abortion access did not statistically vary based on Vanessa's age (see Table 3.3 for ordinal regression results). Respondents with higher levels of education were more likely to support abortion access than those who reported less education ($OR = 1.15, p = .028$). Conversely, those who identified more strongly with their preferred religion tended to be less supportive of abortion access than those who identified less strongly with their preferred religion ($OR = 0.41, p < .001$). However, attitudes also varied across religions: Mainline protestants were more supportive of (or less opposed to) abortion being an option available to Vanessa than were evangelicals ($OR = 2.18, p = .002$) or Catholics ($OR = 2.27, p = .013$).

3.2 Segment 2

Those who were against abortion access following the first segment heard in the second segment that Vanessa was considering an abortion because the pregnancy had been the result of rape (see Table 3.3 for ordinal regression results). There were no statistically significant differences in support across the three perpetrator types (family member, acquaintance, stranger) to which these respondents were randomly assigned. Among those who heard a rape scenario (i.e., who initially opposed access to abortion), male respondents were more likely than females to soften (if not flip) their position on whether abortion should be available to Vanessa ($OR = 1.67, p = .018$). Respondents who identified more strongly with their preferred religion were less likely to soften their position ($OR = 0.56, p = .004$) on whether abortion should be available to Vanessa. Mainline Protestant were more likely than Evangelical Protestants ($OR = 2.17, p = .015$)

and Catholics ($OR = 2.63, p = .024$) to soften their position on whether abortion should be an option available to Vanessa.

Those who were in support of abortion access following the first segment heard in the second segment that Vanessa was considering an abortion due to a personal circumstance. There were no statistically significant differences in support across the three types of personal rationales (cheated, educational goals, timing) to which these respondents were randomly assigned. Among respondents who heard a personal rationale (i.e., those who initially supported access to abortion), those with higher levels of education were more likely to soften their position ($OR = 1.30, p = .004$) that abortion should be an option available to Vanessa.

3.3 Attitude malleability from Segment 1 to Segment 2

An ANCOVA was run to examine the effect of the rape context and personal rationale on abortion attitudes from Segment 1 to Segment 2 after controlling for respondent characteristics (see Table 3.4). The Shapiro–Wilk test ($p < .001$) indicated that the parametric assumptions of ANCOVA tests were not met. However, given that bootstrapping is not recommended for repeated measures and the bimodal nature of this data (Rasmussen, 1987), analyses using repeated measures ANCOVA proceeded, with the understanding that inferential results of these tests must be viewed as preliminary and unreliable unless and until replicated with more reliable analyses.

After learning that Vanessa’s pregnancy was the result of rape, those who had been opposed to abortion access had a statistically significant shift (with medium effect) toward viewing access to abortion more favorably, $F(1, 263) = 23.22, p < .001, \eta^2 = .08$.

Their views had small but statistically significant associations with respondent religious identity, $F(1, 263) = 5.41, p = .021, \eta^2 = .02$, and sex, $F(1, 263) = 0.18, p = .017, \eta^2 = .02$.

Conversely, after learning that Vanessa was considering an abortion due to a personal rationale, those who has previously been supportive of abortion access had only a negligible (and not statistically significant) shift toward viewing access to abortion less favorably, $F(1, 208) = 0.54, p = .463, \eta^2 = .00$. Their views had small but statistically significant associations with religious identity, $F(1, 208) = 5.09, p = .025, \eta^2 = .03$, education, $F(1, 208) = 5.97, p = .029, \eta^2 = .03$, and sex, $F(1, 208) = 4.54, p = .034, \eta^2 = .02$.

3.4 Attitude malleability from Segment 2 to Segment 3

An ANCOVA was run to determine the effect of parents or husband support or non-support on abortion attitudes from Segment 2 to Segment 3 after controlling for respondent characteristics (see Table 3.4). As was the case with the previous ANCOVA, assumptions of normality were not met given the Shapiro–Wilk test ($p < .001$). There was a statistically significant medium effect in attitude strength between Segment 2 and Segment 3 after hearing that Vanessa’s parents were supportive, $F(1, 58) = 4.48, p = .039, \eta^2 = .08$. Covariates were not statistically related to attitudes in this model.

There was not a statistically significant change in attitude between Segment 2 and Segment 3 after hearing that Vanessa’s parents were not supportive, $F(1, 100) = 1.98, p = .163, \eta^2 = .02$, and none of the covariates were statistically related to attitudes in this

model. Additionally, attitudes did not statistically change between Segment 2 and Segment 3 among those who heard that Vanessa's husband supported her decision to abort, $F(1, 136) = 1.12, p = .292, \eta^2 = .01$, nor among those who heard that Vanessa's husband did not support her decision to abortion, $F(1, 174) = 1.62, p = .823, \eta^2 = .00$.

Table 3.1 Means, Standard Deviations, and Intercorrelations for Study Covariates ($N = 527$).

Variable	<i>M</i>	<i>SD</i>	Range	1	2	3	4
1. Sex	1.65	0.48	1–2	–			
2. Parent status	1.19	0.39	1–2	.12 [.02, .21]**	–		
3. Urban/Rural	3.92	2.75	0–4	-.02 [-.11, .07]	-.06 [-.15, .04]	–	
4. Education	2.10	1.11	1–4	-.04 [-.13, .05]	-.04 [-.13, .06]	-.16 [-.24, -.07]***	–
5. Religiosity	3.27	0.97	1–9	.14 [.04, .24]**	.17 [.07, .27]***	-.03 [-.11, .06]	-.02 [-.11, .07]

Note. Numbers in brackets are 95% bias corrected and accelerated (BCa) intervals of the correlation coefficients.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3.2 *Percentage of Responses Within Each Level of the Independent Variables.*

Independent variable	<i>n</i>	Should not be allowed			Should be allowed		
		Very strongly	Somewhat strongly	Not very strongly	Not very strongly	Somewhat strongly	Very strongly
<i>Age</i>							
16-years-old	175	45.1	10.9	2.3	2.9	18.3	20.6
24-years-old	169	46.7	8.3	1.2	2.4	13.6	27.8
45-years-old	177	42.4	5.6	2.3	0.6	21.5	27.7
<i>Abortion impetus</i>							
Rape	277	45.5	10.1	2.9	3.6	15.2	22.7
Personal rationale	242	12.8	5.8	1.7	9.9	27.7	42.1
<i>Who supports abortion</i>							
Partner/parents supportive	206	70.9	14.1	1.5	2.9	6.3	4.4
Partner/parents not supportive	305	9.5	10.5	1.6	4.9	29.8	43.6

Table 3.3 Ordinal Logistic Regression: How Strongly Do You Feel that Abortion Should or Should Not be an Option Available?

Predictor	Segment 1 (n = 496)					Segment 2: rape (n = 262)					Segment 2: personal rationale (n = 141)				
	B	SE	p	OR	95% CI	B	SE	p	OR	95% CI	B	SE	p	OR	95% CI
<i>Independent variables</i>															
16-years-old ^(24-years-old)	-0.30	0.22	.174	0.74	[0.48, 1.14]	0.26	0.25	.288	1.30	[0.80, 2.11]	-0.34	0.31	.271	0.72	[0.39, 1.30]
45-years-old ^(24-years-old)	0.18	0.22	.396	1.20	[0.79, 1.84]	0.25	0.25	.326	1.28	[0.78, 2.11]	-0.51	0.29	.082	0.60	[0.34, 1.07]
Education ^(infidelity)											-0.17	0.36	.636	0.84	[0.42, 1.70]
Does not want child now ^(infidelity)											-0.46	0.39	.228	0.63	[0.30, 1.34]
Education ^(does not want child now)											0.29	0.34	.390	1.34	[0.69, 2.63]
Rape family member ^(acquaintance)						-0.22	0.35	.530	0.80	[0.40, 1.60]					
Rape stranger ^(acquaintance)						-0.03	0.36	.519	0.81	[0.43, 1.53]					
Rape family member ^(stranger)						0.01	0.39	.969	0.99	[0.50, 1.96]					
<i>Respondent characteristics</i>															
Male ^(female)	-0.16	0.19	.400	0.71	[0.59, 1.23]	0.52	0.22	.018	1.67	[1.09, 2.56]	0.15	0.25	.534	1.17	[0.72, 1.89]
Children ^(no children)	0.01	0.24	.968	1.01	[0.64, 1.60]	0.06	0.27	.830	1.06	[0.62, 1.80]	0.03	0.32	.920	1.03	[0.55, 1.93]
Urban/ Rural	-0.04	0.03	.198	0.96	[0.90, 1.02]	-0.02	0.04	.521	0.98	[0.90, 1.05]	0.02	0.05	.699	1.02	[0.93, 1.11]
Education	0.14	0.06	.028	1.15	[1.02, 1.30]	-0.01	0.04	.854	0.99	[0.85, 1.14]	0.26	0.09	.004	1.30	[1.09, 1.56]
Religiosity	-0.90	0.14	< .001	0.41	[0.31, 0.53]	-0.58	0.20	.004	0.56	[0.38, 0.83]	-0.23	0.17	.172	0.79	[0.57, 1.11]
<i>Religion</i>															
Catholic ^(Evangelical)	-0.05	0.28	.857	0.95	[0.55, 1.65]	-0.20	0.33	.557	0.82	[0.43, 1.58]	-0.14	0.36	.702	0.87	[0.43, 1.76]
Mainline ^(Evangelical)	0.78	0.25	.002	2.18	[1.34, 3.54]	0.78	0.32	.015	2.17	[1.16, 4.06]	0.22	0.31	.479	1.24	[0.68, 2.27]
No Preference ^(Evangelical)	-0.41	0.48	.391	0.66	[0.26, 1.70]	-0.34	0.75	.646	0.71	[0.16, 3.06]	0.45	0.55	.419	1.56	[0.53, 4.61]
Catholic ^(Mainline)	-0.83	0.33	.013	0.44	[0.23, 0.84]	-0.97	0.43	.024	0.38	[0.16, 0.88]	-0.35	0.41	.391	0.70	[0.31, 1.58]

Note. Reference category in parentheses. CI = confidence interval for odds ratio (OR).

Table 3.4 Means, Standard Deviations, and Analysis of Covariance Controlling for Respondent Characteristics

	<i>n</i>	<i>Segment 1 or 2</i>		<i>Segment 2 or 3</i>		<i>F</i>	<i>p</i>	η^2
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Segment 1 → 2								
Rape	263	1.22	.49	3.00	2.14	23.22	< .001	.08
Personal Rationale	208	5.50	.59	4.67	1.69	0.54	.463	.00
Segment 2 → 3								
Parents Supportive	58	1.33	.60	1.62	1.27	4.48	.039	.08
Husband Supportive	136	1.29	.57	1.74	1.44	1.12	.292	.01
Parents Against	100	5.39	.72	4.46	1.80	1.98	.163	.02
Husband Against	174	5.45	.65	4.78	1.62	0.05	.823	.00

Note. The following covariates are included in these models: sex, parental status, urban/ rural classification, education, religiosity, and religious preference.

CHAPTER 4. DISCUSSION

Some research on abortion attitudes (e.g., Hans & Kimberly, 2014; Jozkowski et al., 2018) has been designed to account for—and the results have shown—evidence indicating that attitudes are often responsive to context and are complex. The design and results of the present study add to that subset of the abortion attitudes literature by again showing that attitudes tend to soften or change as more context is provided, and that that finding holds even with contextual circumstances not previously examined in this way.

Notably, nuances regarding context (i.e., age, perpetrator, personal rationale) did not seem to matter as much as the broader circumstances of the pregnancy, such as whether it was the result of rape. Indeed, the findings suggest that general circumstances—even if not nuanced details—regarding the context of a pregnancy are important for understanding abortion attitudes, especially considering that many respondents expressed very strong or somewhat strong views (in the reverse direction) even after flipping from their previous position.

Although there was not a statistical change among respondents who initially stated that abortion should be accessible upon learning of the personal circumstances rationale for considering abortion, there was more variability among responses within this group after Segment 2, suggesting that the additional context initiated a softening or flipping of their previous position for some respondents. Although a relatively small percentage of Americans take an absolutist position on abortion in that they do not change their stance no matter the circumstance, there is a greater percentage of individuals who believe that abortion should be legal in all circumstances (19%) than

those who state abortion should be illegal (8%) in all circumstances (Pew Research Center, 2022).

Previous studies have typically not found meaningful gender differences when inquiring about views concerning the legality of abortion; men and women tend to report similar levels of support for abortion, especially in circumstances of rape (Pew Research Center, 2022). However, among respondents in the present study who initially indicated opposition to abortion access and therefore heard about a rape scenario, men were more likely than women to soften or flip that stance upon learning that the pregnancy was a result of rape. Given that Pew Research Center (2022) has found that abortion issues tend to be thought about by women more than men, and that women are more likely than men to report knowing someone who has had an abortion, women may have taken into account the various circumstances that could lead a woman to contemplate abortion even before the rationale was revealed in the vignette, which would explain why women exhibited less malleability than men as more context was revealed. For similar reasons, it could also be that women who are “strongly opposed” to abortion access tend to hold that view more strongly than men who are “strongly opposed.” Another possible explanation is that women tend to be more religious than men (Schnabel, 2015); religiosity is negatively associated with support for legal abortion (Barkan, 2014), and one’s attitude tends to reflect within-group consensus (Clarkson et al., 2013).

As previous research and policy suggest, the support or nonsupport of a parent seems to be important when considering abortion access for a minor (Saad, 2005). This additional context seemed to be more influential for individuals who had previously indicated that abortion should not be available (and therefore heard about supportive rather than

unsupportive parents). Although there was not a statistical change among individuals who were initially supportive (and therefore heard that the parents were not supportive), there was larger variability among their responses following Segment 3, indicating that the additional context of a parent being unsupportive initiated a softening or flipping of the previous position for some respondents. The findings also suggest that context regarding husband support or nonsupport (the direction differing from the respondents stated position) did not statistically influence attitudes but seemed to increase variability among the attitudes within this group, indicating that for some individuals this context challenged them to soften or flip their position. This finding seems to suggest that most respondents valued their own assessment of Vanessa's circumstances over her husband's assessment.

In terms of abortion policy, this random sample of Kentucky residents is particularly useful in a post-*Roe* legal context where abortion laws are determined by each individual state. Currently, abortion access in the state of Kentucky is only available in circumstances where required to save the would-be mother's life; there are no exceptions related to rape or incest (Schreiner, 2024). The substantial softening of opposition to abortion access among those generally opposed to abortion upon learning that the pregnancy was a result of rape suggests that current Kentucky law is not reflective of beliefs among the residents of Kentucky. Although the findings of this study cannot be generalized beyond Kentucky, it is reasonable to hypothesize that similar factors would be associated with similar outcomes in other states. In any case, replication and extension of this study with other populations could further inform policy by

enhancing knowledge concerning the extent to which abortion attitudes are malleable according to contextual circumstances.

4.1 Limitations & Future Directions

Future directions for further developing the literature on abortion attitude malleability includes contextual circumstances that have not been examined in this way before. For example, given that the life of the would-be mother provides legal justification for an abortion in Kentucky but a pregnancy due to rape does not, it would be useful to better understand the malleability of attitudes among those generally opposed to abortion in contexts when the mother's life is at risk versus when the pregnancy resulted from rape. Similarly, developmental abnormalities in the fetus are another exception available in many states where their laws generally restrict access to abortion (Feliz et al., 2023); this is another area needing further study in the context of abortion attitudes and the malleability of those attitudes.

More generally, new measurement techniques are needed that can capture the inherent complexity of decisions concerning abortion, as well as the complexity and malleability of abortion attitudes concerning those decisions and the legality of them. Given the theoretical structure of attitudes, it may be beneficial to incorporate questions that measure affect. The tripartite model (Rosenberg, 1960) postulates that attitudes have three components (affect, behavior, cognition), and that when these three components are aligned, attitudes will be more strongly and rigidly held than when the three components are discordant to one another. Kim and Steinberg (2023), for example, found that when individuals had had an abortion or learned that someone they knew had an abortion, their

knowledge about abortion became more accurate and they became more supportive of access to abortion.

4.2 Conclusion

Although abortion attitudes have been thoroughly investigated and population-level attitudes have not changed much over the past half-century, polls inquiring about abortion attitudes tend to ask isolated questions about if, and in what circumstances, abortion should be legal; this approach hindered understanding of how individual-level attitudes shift based on the varied circumstances that tend to result in a desire to abort a pregnancy. The purpose of this study was to examine the extent to which abortion attitudes both varied and changed according to several contextual factors: the woman's developmental age, educational attainment goals, lack of desire to have children right now, infidelity, rape, and her husband or parents' disposition concerning her potential abortion. Consistent with previous research on abortion attitudes, individuals tended to initially state strong attitudes toward abortion access, but their positions tended to shift upon learning more context related to the situation, suggesting a need for more nuanced approaches to measuring abortion attitudes than is generally done with opinion polling or attitudinal research.

APPENDIX

Vanessa, a **16-year-old/24-year-old/48-year-old**, is pregnant and is considering having an abortion.

- Based only on this information, do you think that abortion should or should not be an option available to Vanessa?
 - Should
 - Should Not

- How strongly do you feel that abortion *should/should not* be an option available to Vanessa?
 - Very Strongly
 - Somewhat Strongly
 - Not Very Strongly

- Briefly explain in your own words why you chose this answer.
 - Type responses verbatim.

It turns out that Vanessa does not want to continue the pregnancy because...

- A) it will interfere with her educational goals – *after completing high school she wants to go to college/she recently returned to college full-time.***
- B) she simply does not want children at this point in her life.**
- C) she became pregnant while cheating on her partner.**
- D) she became pregnancy after being raped by a family member/a stranger/an acquaintance.**

- Given this new information, do you think that abortion should or should not be an option available to Vanessa?
 - Should
 - Should Not

- How strongly do you feel that abortion *should/should not* be an option available to Vanessa given her rationale for wanting an abortion?
 - Very Strongly
 - Somewhat Strongly
 - Not Very Strongly

- Briefly explain in your own words why you chose this answer.
 - Type responses verbatim.

Upon telling her *husband/parents* that she wants to have an abortion, Vanessa learns that *he is/they are [supportive/not supportive]* of her decision *given the circumstances/because he is/they are opposed to abortion despite the circumstances.*

- Given Vanessa's desire for an abortion and her *husband's/parents' support/lack of support*, do you think Vanessa should or should not have an abortion?
 - Should
 - Should Not

- How strongly do you feel that Vanessa *should/should not* have an abortion?
 - Very Strongly
 - Somewhat Strongly
 - Not Very Strongly

- How much influence do you think Vanessa's *husband/parents* should have on the decision?
 - A Great Deal
 - A Moderate Amount
 - A Little Bit
 - None At All

- Briefly explain in your own words why you chose these answers.
 - Type responses verbatim.

Demographics

1. How old were you on your last birthday?
2. How many children do you have?
3. Which of the following best describes your race or ethnic group:

White	Asian American
Latino or Hispanic	American Indian, or
African American	Something else
4. Which of the following best describes your religious preference? Would you say:

Baptist	Jewish, or
Catholic	Something else
Protestant	No religious preference
Islamic	
5. How strongly do you identify with that religion? Would you say that you identify:
 - Very strongly
 - Somewhat strongly
 - Somewhat weakly, or
 - Very weakly
6. How often do you attend religious services? Would you say you go:

Twice per week or more,	Once or twice a month,
Once a week,	A few times a year,
Almost every week,	Rarely, or
	Never?
7. What is the last grade in school you have completed?

Grade school only	1 or 2 years college, no degree
Some high school	Graduated junior or community college
Graduated high school	Vocational-technical degree
GED	3 or 4 years of college, no degree

Bachelor's degree

Graduate degree

Some graduate school work

8. Finally, last year, in 2005, what was your total household income from all sources before taxes?

Under \$5,000	\$15,000-\$20,000	\$70-\$90,000
\$5-\$7,500	\$20-\$25,000	\$90-\$120,000
\$7,500-10,000	\$25-\$30,000	\$120-\$150,000
\$10-\$12,500	\$30-\$40,000	Over \$150,000
\$12,500-\$15,000	\$40-\$50,000	
	\$50-\$70,000	

9. Record respondent's sex (don't ask respondent).
- Male
 - Female
10. [If female] How many (induced, not spontaneous) abortions have you had in your lifetime?
[If male] How many times has your current or a former sex partner had an abortion for a pregnancy that resulted from sexual contact with you?
- [If 0 then go to 14, else continue]
11. How long ago was the [most recent] abortion?
12. In retrospect, do you feel that having that abortion was a good decision given the circumstances?
13. May a University of Kentucky professor doing research on abortion contact you to better understand your abortion experience?
- Yes
 - No [skip to 14]
14. Record contact information:
- Name (first name is sufficient)
 - Telephone Number (required)
 - E-mail Address (desirable, but not required)
 - Mailing Address (optional)
15. Assess the respondent's understanding of the survey (not asked).
- Excellent
 - Good
 - Fair
 - Poor

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VITA

Allison Leip

EDUCATIONAL INSTITUTIONS

B.S., Family, Youth, and Community Sciences, 2017

University of Florida

Gainesville, FL

PROFESSIONAL POSITIONS HELD

Intern Therapist, UK Family Center, 2021-2023

Graduate Research Assistant, University of Kentucky, 2020-2024

PUBLICATIONS

Occa, A., Leip, A., Merritt, A. S., & Stapleton, J. L. (2022). Prevalence and correlates of invitation to participate in clinical trials among US adults. *Preventive Medicine Reports*, 26, 101742.

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