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Shifting Abortion Attitudes using an Empathy-based Media Intervention: A Randomized Controlled Study

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Shifting Abortion Attitudes using an Empathy-based Media Intervention:
A Randomized Controlled Study

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Community Health Promotion

by

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ABSTRACT

U.S. abortion restrictions diminish access and perpetuate a culture of hostility toward abortion seekers. Support for restrictions is high—potentially, because restriction knowledge is low and attitudes are complex. The current study focused on knowledge and support of restrictions and empathy for abortions seekers among Arkansans. The purpose was to evaluate the effectiveness of a video intervention intended to increase awareness of Arkansas abortion restrictions and induce empathy for abortion seekers.

Using a randomized controlled trial with pre-, post-, and follow-up design, a sample of Arkansans ($N = 369$) were randomly assigned to one of five video conditions--either a control or an intervention, varying by actor's race and pregnancy narrative. Data were analyzed across the study with repeated-measures analyses of variance, chi-squared analyses, and hierarchical regressions.

Manuscript 1: For knowledge of restrictions, there was a statistically significant interaction between the effects of time and video condition. Specifically, post-test scores were significantly higher than pre-test and follow-up scores. In terms of support for restrictions, the time main effect was significant, but the group main effect was nonsignificant. Manuscript 2: chi-squares indicated participants who watched a testimonial where the woman was raped had higher empathetic feeling scores. Post-test empathy sum scores were a function of sex, experience with abortion and sexual assault, baseline Empathic Concern, and video condition; follow-up scores were a function of personal experiences with abortion and sexual assault, sex, and Empathic Concern. The testimonial depicting a Black woman who was raped induced the most empathy at post-test.

The intervention was effective in increasing awareness and decreasing support for myriad Arkansas abortion restrictions. Knowledge scores were significantly higher among those who watched a testimonial; this may be because information was repeated or because emotional connections made the information more memorable. Support decreased across the study, however, the intervention did not have the hypothesized effect on this outcome. Prior personal experiences and internalization of abortion stigma can affect empathy induction. People were more empathetic for the woman who was raped compared with the consensual narrative. The hierarchy of abortion narratives may influence perceptions of abortion seekers.

Key words: abortion, abortion legislation, empathy, video intervention, Arkansas

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DEDICATION

“And yet, women keep trying. They put off the rent or the utilities to scrape together the \$500 for a first-trimester abortion. They drive across whole states to get to a clinic and sleep in their cars because they can’t afford a motel. They do not do this because they are careless sluts or because they hate babies or because they fail to see clearly what their alternatives are. They see the alternatives all too clearly. We live, as Ellen Willis wrote, in a society that is “actively hostile to women’s ambitions for a better life. Under these conditions the unwillingly pregnant woman faces a terrifying loss of control over her fate.” Abortion, wrote Willis, is an act of self-defense.”

— Katha Pollitt, *Pro: Reclaiming Abortion Rights*, p. 8

This study is dedicated to 1) the people who have considered, sought, or had abortions in Arkansas and 2) the advocates and legislators who tirelessly fight to maintain Arkansas abortion access.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION.....	1
Background.....	1
Abortion restrictions.....	1
Abortion restrictions in Arkansas.	2
Impact of restrictions.....	3
Impact of restrictions in Arkansas.....	4
Theoretical explanation for restriction impact.....	4
Strategy to combat restrictions	5
Raising awareness and increasing empathy	8
Previous work with knowledge.....	8
Previous work with empathy.	9
The Current Study.....	10
Research Design and Methods	12
Intervention.....	12
Procedures.	13
Analyses.	15
Potential limitations.	15
Expected Outcomes	16
CHAPTER 2: SUMMARY OF EVIDENCE.....	18
1. Practices of Abortion.....	18
Safety of abortion.....	18
Procedural abortion	20
Aspiration procedures.....	21
Medication abortion.	22
Cost of procedures.....	23
Prevalence of abortion.....	23
Impact of finances	24
2. Politicization of Abortion	25
Legality of abortion.....	25
Roe v. Wade.....	25
Cognitive framing of abortion.	27
The “pro-life”/fetal-centric frame.	28
Technology	29

Language.....	29
Fetal pain.....	29
Crisis pregnancy centers.....	30
The “pro-choice”/woman-centric frame.....	31
Conceptualization of the “pro-life”/“pro-choice” rhetoric.....	33
Similarities in conceptualization.....	33
Differences in conceptualization.....	35
Knowledge of abortion.....	37
3. Attitudes toward Abortion.....	38
Affect-based attitudes toward abortion.....	40
Feelings towards individuals involved with abortion.....	41
Individuals who work in abortion provision.....	42
Women who have abortions.....	43
Supporters of women who have abortions.....	44
Mechanisms of stigma.....	44
Affect-based outcomes after an abortion.....	45
Post-abortion attitudes by gender.....	47
Affect-based outcomes after a denied abortion.....	48
4. Legislation and Voting.....	48
Post-Roe abortion legislation.....	49
Types of restrictions.....	50
Parental involvement.....	51
Pre-abortion counseling.....	52
Waiting period.....	53
Ultrasound.....	53
Federal funding.....	54
Private funding.....	56
Medication abortion.....	56
Abortion facilities.....	57
Viability.....	59
Overturn of Roe v. Wade.....	60
Restrictions for physicians.....	62
Knowledge of abortion laws.....	63
Voting on abortion.....	65
Political party.....	66
Legislator characteristics.....	66
Legislator vs. constituents.....	67
5. Abortion in Arkansas.....	69

6. Interventions with Abortion.....	72
Changing affect-based attitudes with empathy.....	74
The role of perspective-taking	75
Empathy and abortion.....	76
Manipulating empathy and knowledge.....	77
7. The Current Study.....	79
8. Theoretical Framework	81
Intersectionality	81
CHAPTER 3: METHODOLOGY	88
The Current Study.....	88
Research Design	89
Videos.....	91
Cognitive (knowledge) portion.....	91
Affective (testimonial) portion.....	92
Procedures	92
Measures.....	95
Demographic questions.....	95
Voting behaviors.....	95
Media consumption behaviors.....	95
SDO7 scale.....	96
Interpersonal Reactivity Index (IRI).....	96
Abortion restrictions in Arkansas.....	96
Knowledge of abortion.....	97
Attitudes toward women who seek abortions.....	97
Marlowe-Crowne desirability scale-short form.....	97
Empathy for women seek abortions in Arkansas.....	98
Inclusion of Other in the Self (IOS) scale.....	98
Source-Credibility scale (Ohanian, 1990).....	98
Research Questions and Hypotheses	102
Data Analyses	105
Appendices	108
Table 3.1	108
Table 3.2.....	109

CHAPTER 4: MANUSCRIPT 1	110
Abortion Restrictions in Arkansas.....	113
Knowledge and Support of Restricting Abortion Access	115
The Current Study.....	117
RQ1	118
RQ2	118
Methods.....	118
Participants	118
Procedures	120
Intervention Videos.....	121
Content.....	121
Informational portion.....	121
Testimonial portion	122
Production.....	122
Measures.....	123
Knowledge of and support for abortion restrictions.....	123
Marlowe-Crowne desirability scale-short form (Ballard, 1992; Reynolds, 1982).	124
Source-credibility scale (Ohanian, 1990).....	124
Confounding factors.....	124
Analyses	124
Results.....	125
Baseline	125
Source-credibility.....	127
Social desirability.....	127
Confounding factors.....	128
Descriptive Statistics.....	128
Knowledge of abortion restrictions.....	128
Support for abortion restrictions.....	129
Repeated Measures	130
Knowledge of abortion restrictions.....	130
Support for abortion restrictions.....	131
Discussion	132
Knowledge of Abortion Restrictions	133
Support for Abortion Restrictions.....	135
Limitations and Future Research.....	140
Conclusion.....	141

Acknowledgements.....	142
Appendices	143
Table 4.1	143
Table 4.2.....	144
Table 4.3.....	146
Table 4.4.....	147
Table 4.5.....	149
 CHAPTER 5: MANUSCRIPT 2	 151
Introduction	153
Barriers to Abortion Access	154
Legislative barriers.....	154
Stigmatization.....	155
Beliefs about women.....	156
Beliefs about race.....	156
Perceived pregnancy responsibility.....	157
Empathy.....	158
Strategies to Induce Empathy	160
The Current Study.....	160
RQ1.....	161
RQ2.....	161
RQ3.....	161
Methods.....	162
Participants	162
Procedures	163
Intervention Videos.....	164
Content.....	164
Informational portion.....	164
Testimonial portion.....	164
Measures.....	166
Feelings of empathy.....	166
Sex.....	167
Experience with abortion and sexual assault.....	167
Interpersonal Reactivity Index (IRI; Davis, 1980).....	167
Source-credibility scale (Ohanian, 1990).....	167
Analyses	168
RQ1 and RQ2.....	168
RQ3.....	168

Results	169
Effects of Interventions	169
RQ1 and RQ2.....	169
RQ3.....	170
Discussion	171
Effect of Race on Empathy.....	171
Effect of Perceived Pregnancy Responsibility on Empathy.....	173
Effect of Personal Experiences and Traits on Empathy.....	174
Limitations.....	175
Implications and Future Directions.....	176
Acknowledgements.....	177
Appendices	178
Table 5.1	178
Table 5.2.....	179
Table 5.3.....	180
Table 5.4.....	181
Table 5.5.....	181
Table 5.6.....	184
CHAPTER 6: OVERALL CONCLUSION	186
Overall Findings and Implications.....	188
Finding 1: Watching a testimonial helped knowledge retention.....	188
Finding 2: Disregarding video condition, support for restrictions was higher than expected.....	188
Finding 3: The rape narratives were more effective in inducing empathy than the consensual-sex narratives.....	189
Finding 4: The testimonial portraying a Black woman who was raped created the most empathy.....	189
Finding 5: Personal experiences are key to inducing empathy about abortion.....	190
Contributions to the Field.....	190
Future Directions	193
Research Trajectory	195
Lessons Learned and Personal Reflection.....	196
The dissertation process.....	197

The doctoral process.	198
Teaching progression.	199
Research progression.....	200
Searching for an academic position.	202
REFERENCES	205
APPENDICES	230
Appendix A: Video Script Content Tables.....	230
Appendix B: IRB Approval Letter.....	241
Appendix C: Online Survey Materials.....	242
Appendix D: Survey Instrument.....	245

LIST OF TABLES AND FIGURES

CHAPTER 3

Figure 3.1: Flow diagram.....	91
Figure 3.2: Diagram for study protocol	94
Figure 3.3: Illustration of hypotheses 1.1-1.2.....	103
Figure 3.4: Illustration of hypotheses 2.1-2.2.....	104
Figure 3.5: Illustration of hypotheses 2.3.....	105
Table 3.1: Manuscript 1 analyses	108
Table 3.2: Manuscript 2 analyses	109

CHAPTER 4

Figure 4.1: Flow diagram.....	119
Figure 4.2: Repeated-measures ANOVA results on KAR scores	131
Figure 4.3: Repeated-measures ANOVA results on SAR scores.....	132
Table 4.1: Participant Demographics	143
Table 4.2: Chi-square Results for Demographic Characteristics and Video Condition	144
Table 4.3: Descriptive Statistics and Repeated-Measures ANOVAs for KAR scores and SAR scores Examining by Intervention Across Three Time Points	146
Table 4.4: Knowledge of the Main Types of Abortion Restrictions in the U.S. at Pre-test, Post-test, and Follow-up.....	147
Table 4.5: Support for the Main Types of Abortion Restrictions in the U.S. at Pre-test and Follow-up	149

CHAPTER 5

Figure 5.1: Flow diagram.....	163
Table 5.1: Participant Demographics	178
Table 5.2: Mean Scores of Empathy Characteristics for Women who seek Abortions/Woman in the Video at Post-test and Follow-Up.....	179
Table 5.3: Chi-square Results for Post-test Empathy Characteristic Scores and Perceived Pregnancy Responsibility Video Condition	180
Table 5.4: Means, Standard Deviations, and Intercorrelations for Empathy Sum Scores and Predictor Variables.....	181
Table 5.5: Hierarchical Regression Analysis Predicting Post-test Empathy Sum Scores with Empathic Concern, Social Desirability, Sexual Assault Experience, Abortion Experience, Sex, Video Condition.....	182
Table 5.6: Hierarchical Regression Analysis Predicting Follow-up Empathy Sum Scores with Empathic Concern, Social Desirability, Sexual Assault Experience, Abortion Experience, Sex, Video Condition.....	184

CHAPTER 6

Figure 6.1: Shout Your Abortion motto.....	186
Figure 6.2: Shout Your Abortion video narratives	186
Figure 6.3: Restrictive and Supportive states 2017 infographic.....	196
Figure 6.4: PhD plan vs. reality.....	197

CHAPTER 1: INTRODUCTION

Background

There are an estimated 6.2 million pregnancies per year in the United States, nearly half (45%) of which are unintended (Guttmacher Institute, 2017a). Approximately 19% of all pregnancies (i.e., intended and unintended) will end in abortion (Guttmacher Institute, 2017a), with greater frequency among those who experience unintended pregnancy (i.e., 40%; Finer & Zolna, 2016). The rate of abortion in the U.S. is 14.6 per 1000 women of reproductive age (Dreweke, 2017) and less than 0.5% of women experience complications from abortion in the first trimester (Guttmacher Institute, 2017a). Given these data, it is apparent that abortion is a common and safe pregnancy outcome. Although abortion has been legal in the U.S. for over 45 years (with *Roe v. Wade* in 1973) and is safe and common, it remains a salient and contentious public health issue and has spurred myriad legislative restrictions. The following sections will discuss general restrictions in the U.S. and then will narrow scope to discuss restrictions in Arkansas, a particularly “hostile” state toward abortion. Then I will briefly describe the impact of these restrictions in both the U.S. and Arkansas, and offer a theoretical explanation of this impact. Finally, I will discuss strategies for intervention aimed at reducing this impact and describe the proposed study based on the aforementioned theoretical framework.

Abortion restrictions. In the last five years, there has been a significant increase in state-level restrictions. For example, state legislatures passed approximately the same number of legislative abortion restrictions from 2011 to 2016 as they had passed in the previous fifteen years (Guttmacher Institute, 2016a). In 2016, a total of 50 new legislative restrictions were passed at the state-level, resulting in 338 laws restricting abortion in 6 years and comprising 30% of the total number of abortion laws passed since it became legal in 1973 (Nash et al., 2017). The

Guttmacher Institute classifies abortion restrictions enacted across the U.S. into 10 specific categories. Examples of these common state restrictions include mandatory waiting periods between pre-abortion counseling and abortion provision, restricting insurance coverage, and requiring providers to give information (much of which is false or misleading) during pre-abortion counseling. If a state has four or more of these restrictions, they are considered “hostile” to abortion and if they have more than six, they are considered “extremely hostile.” In 2017, twenty-two states were considered “extremely hostile” and nearly all were in the Southern region of the U.S. (Nash et al., 2017). The number of restrictions in just ten of these states account for 60% of all new restrictions in the U.S. (Guttmacher, 2016b). Arkansas is among these ten extremely hostile Southern states.

Abortion restrictions in Arkansas. Arkansas is among the top three states with the most abortion restrictions (22) passed between 2011 and 2015 (Guttmacher Institute, 2016b). In response to the expanding list of proposed restrictions, legal teams from nonprofit organizations such as the American Civil Liberties Union (ACLU) and the Center for Reproductive Rights filed suit against these hostile states. For example, in 2017, the state of Arkansas passed a restriction prohibiting the dilation and evacuation (D&E) procedure, a restriction enacted in only seven states as of mid-February 2017 (Donovan, 2016). Soon thereafter, the ACLU initiated a lawsuit that resulted in a judge blocking the restriction (DeMillo, 2017). Therefore, these new restrictions change quickly and often. Despite the consistent challenging of new laws, restrictions in eight of the ten major categories are enacted in Arkansas. Consequently, Arkansas’ myriad restrictions have resulted in only three facilities in the entire state (Cartwright, Karunaratne, Barr-Walker, Johns, & Upadhyay, 2018) able to provide abortion services for approximately 600,000 women of reproductive age (i.e., 15-44; March of Dimes, 2019). In addition, the

restrictions are an important part of the reason that 97% of Arkansas counties do not have a facility that can offer abortions, leaving 77% of women in Arkansas without an accessible facility in their county (Jones & Jerman, 2017a). Consequently, although abortions are *theoretically* legal in all 50 states, recent increases in legislative abortion restrictions at the state level (e.g., Arkansas) have limited practical abortion accessibility, especially for low-income women and women of color.

Impact of restrictions. Deprivation of accessible facilities is a significant concern because abortion is a common outcome of pregnancy. When women are denied abortion access, they report increased negative mental health outcomes such as depression and anxiety compared to women who obtained a sought-after abortion (Foster et al., 2015). Additionally, women who may be forced into motherhood prematurely (by being denied a sought-after abortion) are less likely to achieve future plans such as finish high school or secure higher paying employment, and are more likely to live in poverty (Foster, Biggs, Ralph, Gerds, Roberts, & Glymour, 2018; Gipson, Koenig, & Hindin, 2008; Upadhyay et al., 2015). Further, research shows that being denied an abortion has long-lasting effects related to economic hardship. Foster and colleagues (2018) found that, six months following their pregnancy outcome, women who were denied abortions and gave birth were less likely to be employed full-time, more likely to be on public assistance (e.g., food stamps, WIC), and had lower personal income than those who were able to obtain wanted abortions. The cohort of women who gave birth after being denied an abortion continued to live in poverty four years later, by both subjective (i.e., reported they did not have sufficient funds to cover basic living expenses) and objective (i.e., income was below the federal poverty level) definitions (Foster et al., 2018). Thus, the significant influx of state-enacted restrictions on abortion access is cause for alarm.

Impact of restrictions in Arkansas. Although overall abortion rates have decreased nation-wide (Dreweke, 2017), rates in Arkansas have increased in recent years from 7.6 to 8.0 abortions per 1,000 women of reproductive age (Jones & Jerman, 2017a). At a national level, most patients seeking and obtaining abortions are in their 20's, low-income, and vary by race/ethnicity (Jerman, Jones, & Onda, 2016). In Arkansas, a state that is 79.4% White, 15.7% Black, and 7.3% Latino/a (United States Census Bureau, 2016), a disproportionate number of low-income residents are people of color (i.e., 28.9% Black and 26.7% Latino, whereas only 14.1% White are low-income; Center for American Progress, 2017). Therefore, at a state level, restrictions placed on abortion have the ability to affect Arkansan women of color disproportionately, a segment of the population already at increased risk for experiencing unintended pregnancy (Arkansas Department of Health, 2010).

Theoretical explanation for restriction impact. An intersectional paradigm (Crenshaw, 1989) offers an explanation as to why restrictions in Arkansas disproportionately affect low-income women of color by addressing how multiple social identities relate to power (e.g., privilege) and oppression at a micro-level and a macro-level. That is, the combined micro-level social identities (i.e., gender, class, race) of low-income women of color are the most disadvantaged at a macro-level in society. According to this framework, oppression at a macro-level compounds as more micro-level social identities intersect, a phenomenon that has been applied to obstacles infringing on women's abortion access (Price, 2011). For example, women in general endure the most of the burden of an unintended pregnancy; women of color face racism and social marginalization, and low-income women face a lack of resources including limitation of Medicaid coverage (Boonstra, 2016; Jones & Kavanaugh, 2011). Thus, a low-income woman of color in Arkansas must overcome obstacles that are associated with all three

identities. These obstacles could infringe on her ability to afford or to use birth control correctly and consistently, which could increase her risk of unintended pregnancy, therefore increasing the possibility of abortion.

These oppressions affect all aspects of a woman's unintended pregnancy, including how others perceive her. For example, a woman's social identities may change how others perceive her responsibility for the situation in which a pregnancy occurred (e.g., consensual sex, rape). A woman who is pregnant because of consensual sex will likely be judged more harshly for seeking an abortion than a woman who was raped on the assumption that people will think the woman who became pregnant because of consensual sex had some control over her risk of pregnancy (Hans & Kimberly, 2014). Adding biases toward low-income women and women of color (e.g., misconceptions such as laziness or lack of education) exacerbates those perceptions, widening the gap between privileged and oppressed women with social minority statuses (e.g., low-income, not White) and women with social majority statuses (e.g., high-income, White).

Strategy to combat restrictions. In order to combat the influx of abortion restrictions and their particular impact on low-income women of color, it is important to understand how these restrictions are passed. First, legislators introduce a bill and it is assigned to a committee. The committee reads the bill and either passes it (with or without amendments) and sends it to the floor (for debate and vote) or another committee, or "kills" it by voting it down. If passed to the floor for a vote, two-thirds of the house and senate must approve after which the governor must sign it. If those steps are successfully completed, the bill becomes law (AAP, 2009). Therefore, if the majority of state legislators (and the governor) are anti-choice, it is relatively easy for bills restricting abortion to pass.

Advocating for women’s reproductive choice by voting for “pro-choice” candidates is a structural strategy that could significantly reduce the influx of abortion restrictions. In theory, legislators are elected to represent the views of their constituents. The majority (80%) of Americans support abortion access under at least under *some* circumstances (Smith & Son, 2013). When looking at the state-level in hostile regions, there also seems to be support for abortion legality, regardless of the number of restrictions in place. According to a study assessing a convenience sample of young adults from Arkansas and Oklahoma, approximately 67.7% indicated support for abortion access (Jozkowski, Crawford, & Hunt, 2018). Similarly, according to the Arkansas Poll (2017), a state-wide telephone survey of residents on political issues, about 60% of Arkansans thought abortion should be legal under at least some circumstances (Parry, 2017), which may suggest that Arkansans are not as “red” on abortion as state abortion restrictions might suggest. Yet anti-choice legislators are still consistently elected to office and propose legislation aimed at restricting abortion access (Wilson, 2017). Given that it appears people believe women should have access to abortion when asked on surveys, yet state-level legislation continues to restrict access, there seems to be a schism between constituents’ abortion opinions and state legislatures.

A potential explanation for this schism could be because the 80% who support abortion access under at least some circumstances fail to vote with abortion in mind or fail to vote at all because they do not see it as an important or critical issue. It could be the case that people may care about abortion but when weighing their values, consult different foundations of morality; therefore, social justice issues (e.g., reproductive rights) may only occupy a portion of their moral world and other values may take precedence (such as patriotism or divinity; Haidt & Graham, 2007), resulting in a lack of civic behavior. This is especially true for Arkansans;

although Arkansas is portrayed as a “red” state, and in the 2016 election, about 60% of Arkansans voted Republican for president, senators, and house representatives (which tend to be in favor of anti-choice legislation; New York Times, 2017), only 53.1% of Arkansans actually voted (McDonald, 2016). Moreover, as a nation, only 20% of the population report abortion views are “very important” regarding which candidate to support, and this 20% is predominantly anti-choice (Bowman & Sims, 2017). Although people believe women should have access to abortion, general knowledge of abortion legislation is low (Cockrill & Weitz, 2011; Lara et al., 2015) and Arkansans’ feelings seem to be mixed with regard to women who seek abortions (i.e., 22.5% feel extremely negative, 14.6% feel extremely positive and 62.9% fall somewhere in the middle; Parry, 2017).

Another explanation for a disjunction between public opinion (e.g., general support for abortion access under at least some circumstances) and the myriad abortion restrictions passed by legislators could be related to this low knowledge and mixed feelings. Research indicates that people may support abortion access and, simultaneously, favor laws that would restrict access (Bowman & Sims, 2017). That is, they may report being in favor of legislation that restricts abortion under the pretense that certain mandated steps (e.g., pre-abortion counseling, ultrasound) improves safety for women, but lack the information about what anti-abortion legislation really means for women who seek abortions (Weitz et al., 2008). Further, they may vote for candidates who put forth such anti-abortion legislation by framing it as an effort to protect women’s health without understanding the real-world implications of these restrictions.

As such, there is a need to increase awareness regarding what these restrictions actually mean in terms of limiting women’s access to abortion and empathy for women who face these limitations. Intervention is needed to address the majority of Arkansans that support abortion

access under at least some circumstances but may support abortion restrictions because of a lack of knowledge about which laws are in place and what the laws actually do. In order to decrease support for abortion restrictions, we plan to intervene at a micro-level by 1) increasing awareness of legislative abortion restrictions in place in Arkansas and 2) increasing empathy for Arkansan women who must face these restrictive laws to get the care they seek.

Raising awareness and increasing empathy. General efforts to shift attitudes often incorporate the use of persuasive messages, however the effectiveness of these messages depend on message type (Ryffel & Wirth, 2016). That is, persuasion efforts aimed at shifting affect-based attitudes (e.g., emotions and feelings) and cognition-based attitudes (e.g., beliefs and judgments) are most effective when there is a match between the message with the type of attitude (i.e., emotional messages with affective attitudes and informational messages with cognitive attitudes; Ryffel & Wirth, 2016). Attitudes toward abortion are unique in that they are often both emotional (e.g., considering how the woman must feel) and cognitive (e.g., scientific statements against existence of fetal pain, plausibility of being able to financially provide for a child), which can lead to complex feelings about abortion and feelings of ambivalence (Alvarez & Brehm, 1995; Craig et al., 2002; Hunt, Marcantonio, Jozkowski, & Crawford, in preparation; Jozkowski, Crawford, & Hunt, 2018). Therefore, in order to decrease support for abortion restrictions, one must address both aspects of these attitudes. To address the cognitive side, we aim to increase extent to which people are aware of restrictions enacted in Arkansas and to address the affective side, we aim to increase positive attitudes and empathy for women who seek abortions by offering a testimonial from someone who has had to face these restrictions.

Previous work with knowledge. To address the cognition-based side of abortion attitudes, our goal is to increase knowledge of abortion in general (i.e., that it is safe, legal, and common)

and of legislative restrictions in Arkansas. Few studies have examined knowledge of abortion or legislation with a general population, none specifically in a hostile state such as Arkansas. Many studies examining knowledge of abortion or abortion legislation focus on health professionals in the U.S. (e.g., Coles et al., 2011; Pace et al., 2008), general populations of outside of the U.S. (e.g., Appiah-Agyekum et al., 2015; Assifi et al., 2016; Phillips, Eltherington, de Costa, & Woods, 2012; Sydsjö et al., 2012; Thapa, Sharma, & Khatiwada, 2014), or health professionals outside of the U.S. (e.g., Chong et al., 2009; Hammarberg et al., 2016). Of the few studies that examine knowledge of abortion and abortion legislation in the U.S. with general populations (e.g., Bessett et al., 2015; Kavanaugh, Bessett & Littman, 2013; Lara et al., 2015; White et al., 2016), all revealed that knowledge among their samples was low and called for interventions to increase such knowledge.

Previous work with empathy. To address the affect-based side of abortion attitudes, our goal is to increase positive attitudes toward women who seek abortions and empathy for women who seek abortions/face restrictions in Arkansas. One mechanism effective in shifting attitudes regarding contentious social issues is empathy-based interventions. For example, empathy-based interventions have been used to destigmatize highly stigmatized groups (persons with AIDS, the homeless population, individuals who are incarcerated; Batson et al., 1997) and reduce disparities in perception of patients' pain based on race (Drwecki et al., 2011). Empathy-based interventions have incorporated a variety of activities to increase people's ability to relate to others such as simulating disabilities (Lor et al., 2015) and conducting assessments to test people's ability to identify others' emotional states (Drwecki et al., 2011; Sherman et al., 2015). In particular, audio and video-based testimonials appear to result in longer lasting attitude changes (Braverman, 2008; Batson et al., 1997; Blas et al., 2010; Parker, Stradling & Manstead,

1996; Roberto et al., 2000). Presently, there are media campaigns that target abortion stigma by trying to normalize abortion with anecdotal experiences similar to testimonials (shoutyourabortion.com). However, research shows that people do not tend to seek out political media content that opposes their views (Knobloch-Westerwick & Meng, 2009). As such, it is unlikely that the majority of voting-aged adults, especially those with at least some opposition to abortion, would seek out such media or be exposed to such media naturally (i.e., without prompting). Therefore, a more targeted intervention is needed.

To date, no media-based interventions have attempted to address abortion knowledge and empathy, specifically targeting perceived pregnancy responsibility, and the potential influence of race. As such, the current study aims to test the effectiveness of an empathy-based, video intervention via a randomized-controlled experiment with Arkansas residents to increase awareness about abortion legislation in Arkansas and shift attitudes towards abortion access.

The Current Study

The current study consisted of several video interventions that addressed either the cognitive side of abortion attitudes (i.e., knowledge of legislation) or the combination of cognition and affect (i.e., empathy for women who seek abortions). The control video did not include the affective component and consisted only of the knowledge portion (a “news anchor” giving a news report about abortion legislation in Arkansas). The intervention videos, aimed to increase empathy, followed the knowledge portion and depicted an actor delivering one of four different testimonials from the perspective of a woman who faced abortion restrictions in Arkansas. We manipulated two variables in the testimonial videos (i.e., race of the woman, perceived pregnancy responsibility) to examine the effects of internalized biases on empathy generated.

We compared control vs. intervention video conditions by examining pre-test, post-test, and follow-up differences of knowledge of current abortion restrictions in Arkansas, support for those abortion restrictions, and empathy for women who seek abortions in Arkansas. We explored the following research questions:

RQ1. Research question 1 aimed to test the effectiveness of the *intervention* videos compared to the *control* video. That is, did watching a video with an empathy-inducing personal story in addition to an informational component (cognitive/knowledge + affective/empathy) induce significantly different outcomes than watching a video that only contained an informational component (only cognitive/knowledge). To explore the effectiveness of the affective/empathy component, we compared outcomes of those who received the control condition to those who received the intervention conditions on two sub questions: 1) knowledge gain/retention about abortion restrictions and 2) differences in support for abortion restrictions in Arkansas.

H1. In general, we posited that those who received an intervention condition (cognitive/knowledge + affective/empathy) would experience a decrease in support for abortion restrictions compared to the control video and an increase in knowledge of abortion and abortion restrictions similar to that of the control video. RQ1 and H1 are described in more detail in Chapter 3.

RQ2. Research question 2 aimed to test if the variables manipulated in the intervention testimonials (race and pregnancy responsibility) would produce different empathy outcomes. Comparisons on empathic characteristic scores were made between the five different video conditions (1) White woman, raped, 2) White woman, consensual sex, 3) Black woman, raped,

4) Black woman, consensual sex, and 5) control (no testimonial). To explore the impact of these variables, we made comparisons between the five condition groups on differences in empathy characteristics after the video as separate scores and as a sum score.

H2. In general, we posited there would be differences in empathy scores by intervention condition. In particular, between intervention conditions, we expected that empathy would be highest among participants who watched a rape testimonial compared with those who watched a consensual testimonial. We expected participants who watched a White testimonial would have higher empathy than those who watched a Black testimonial. Additionally, we examined if other personal experiences/traits contributed to empathy sum scores. we hypothesized that 1) females, 2) people with personal experiences with abortion, 3) people with personal experiences with sexual assault, 4) higher level of baseline Empathic Concern, and 5) people who viewed the video with a White woman who was raped would have the highest empathy sum scores. RQ2 and H2 are described in more detail in Chapter 3.

Research Design and Methods

Intervention. The intervention consisted of five video conditions; participants were randomly assigned to one. A pre-test and two post-tests were administered to all participants (see Figure 1 in Chapter 3 for flow diagram). As described above, the content of the videos were guided by the idea of intersecting social identities and the effect of their combinations (Crenshaw, 1989). That is, some social identities of the person in the video were controlled for and some were manipulated. We controlled for social identities such as gender, socioeconomic status, and age—all people in the video presented as women, indicated that they are low-income, and appeared to be in their 20's to parallel salient characteristics of the majority of abortion patients (75% and 60% respectively; Jerman et al., 2016). Alternatively, we manipulated several

variables: video content (control vs. empathy testimonial), race of the woman in the video (White woman vs. Black woman), and degree of perceived pregnancy responsibility in the testimonial (raped vs. consensual sex). All participants (control and intervention conditions) watched a video clip about current restrictions in Arkansas to increase participants' knowledge about abortion restrictions in Arkansas. The control condition then immediately received a post-test. The intervention conditions watched one of four testimonial video clips after the knowledge clip. This clip depicted a woman speaking about her experience of how restrictions made obtaining an abortion in Arkansas more difficult:

- Control: Knowledge; no Testimonial
- Intervention 1: Knowledge + Testimonial (White woman, Raped)
- Intervention 2: Knowledge + Testimonial (White woman, Consensual Sex)
- Intervention 3: Knowledge + Testimonial (Black woman, Raped)
- Intervention 4: Knowledge + Testimonial (Black woman, Consensual Sex)

After the testimonial clip, the intervention condition received the post-test. Then, participants in all conditions received a follow-up post-test 2 weeks later (Johansson-Love & Geer, 2003).

Procedures. Before the survey was distributed, the instrument was pilot tested with a convenience sample of researchers ($n=10$) to assess clarity/readability. Once the instrument was finalized, we conducted an online video-based randomized-controlled trial with Arkansas residents (18+) ($N=369$) through Qualtrics survey software. A convenience sample of participants were recruited through social media targeted toward Arkansans across the state (e.g., Arkansas specific Reddit threads and craigslist pages), word of mouth, email, and listservs.

First, participants who received the survey link were directed to an introductory page providing them with information about the study. After clicking to the next page, they were directed to an informed consent form, which notified them that by completing the survey, they were indicating their consent to participate. Interested participants clicked to the next page which began the online survey, starting with a pre-test that included: 1) demographic information (including a unique identifier to link participants from pre-test/post-test to follow-up), 2) political behaviors (e.g., voting and media consumption), 3) general knowledge about abortion, 4) knowledge of Arkansas abortion restrictions, 5) support for abortion restrictions in Arkansas, 6) attitudes toward women who seek abortions (i.e., revised from Batson et al., 1997), 7) personal beliefs about social dominance (Ho et al., 2015), 8) identification of Empathic Concern and perspective taking (Davis, 1983), and 9) the Marlowe-Crowne Social Desirability Scale-Short Form (Ballard, 1992; Reynolds, 1982).

After completing the pre-test, participants were randomly assigned to a video-intervention or control group (see Figure 1 in Chapter 3). After viewing the assigned video (control or one of four intervention videos), a post-test with similar questions to the pre-test was administered to assess effects, in addition to measuring empathy toward women who seek abortions in Arkansas (i.e., 6 empathy characteristics from Batson et al., 1997)), modified IOS scale (Aron, Aron & Smollan, 1992), and specific empathy toward the woman in the video for intervention conditions.

Based on previous literature (Johansson-Love & Geer, 2003), a follow up post-test was administered two weeks after the intervention to measure re-bounce effects. The follow-up post-test included similar questions to post-test 1 in addition to 1) measuring participants' evaluation of credibility of the sources (e.g., actors) in their assigned video using the Source Credibility

Scale (Ohanian, 1990) and 2) assessing what relevant media, if any, they consumed in the 2-week period after post-test 1. Participants received one \$10 e-gift card after Post-test 1 and another one after the follow-up post-test to incentivize participation.

Analyses. Data were analyzed by several statistical tests (see Table 1 and 2) with independent variables as assigned video condition and dependent variables as (RQ1) knowledge of restrictions, and support for restrictions, and (RQ2) empathy for women who seek abortions. Additionally, demographic characteristics (e.g., gender, age) and scores on the IRI subscales of Empathic Concern (Davis, 1980) served as control variables. Group sample sizes were generated from a power analysis using G*Power (Faul et al., 2007) with power ($1 - \beta$) set at 0.80 and $\alpha = .05$, two-tailed.

Potential limitations. As with all self-reported data, there is the possibility of self-selection, response, and social desirability biases, especially due to the sensitive nature of the topic. However, to increase respondent honesty, all data were anonymous and participants completed the survey in a private location of their choosing. Additionally, we checked for social desirability using the Marlowe-Crowne Desirability Scale-Short Form (Ballard, 1992; Reynolds, 1982), a scale that assesses the degree to which participants' self-report data may be susceptible to social desirability bias. Lastly, the adult population of Arkansas cannot be generalized to the entire U.S. population, though it may be an adequate representation of other hostile states (e.g., Kansas, Oklahoma). Thus, we are aware this intervention may not be applicable to all potential voters. Alternatively, findings from this study may be most useful in states where access to abortion is more restricted and where there may be more hostile attitudes towards abortion. Although these findings will be preliminary, the current study has potential to inform development of larger scale interventions to increase abortion empathy.

Expected Outcomes

The purpose of the study was to examine a mechanism that could decrease support for abortion restrictions by increasing knowledge and empathy in Arkansas residents. An applied outcome of raising awareness and decreasing support for abortion restrictions could translate to voting behaviors (e.g., voting for “pro-choice” candidates). It is important to note that even though the majority of people support abortion access under at least some circumstances (Jozkowski, Crawford, & Hunt, 2018; Smith & Son, 2013), they oppose access under others and those oppositions may take precedence in terms of rationalizing voting for a candidate who is anti-choice. Unfortunately, people with these attitudes may not realize that methods to restrict access for some women often end up restricting access for all women, particularly those who are most in need of an abortion. First, people may be unaware of restrictive laws in Arkansas and second, people may be unaware of what these restrictions actually mean for women. Thus, exposing participants to testimonials of individuals impacted by these regulations may assist in decreasing support for these restrictions and subsequently motivating them to increase support “pro-choice” candidates. Previous literature has shown testimonials to be more impactful than other mechanisms (e.g., Roberto et al., 2000). The employed intervention could alleviate the surrounding stigma of women who receive abortions by “applying a story to the statistics.” Women may feel ashamed and thus do not share their abortion experiences freely (Norris et al., 2011), further complicating the normalization of their experience and perpetuating stigma. Therefore, negative attitudes toward abortion discourage women from feeling comfortable with sharing their experiences with abortion, place women at a disadvantage, and allow restrictive policies to prevail. Creating empathy for these women could initiate change.

Finally, this study aimed to incorporate differences in empathy by race and pregnancy responsibility into the dialogue about social inequalities regarding abortion. Using an intersectional approach in the analyses and discussion, this study may reveal underlying biases that are addressed less often in discussions about abortion access. Scholars have made a concerted effort to draw attention to the racial inequalities within reproductive access (e.g., Kumar, 2013; Price, 2011) and rape is a commonly accepted exception to abortion restrictions (Guttmacher Institute, 2017d; Mikolajczak & Bilewicz, 2015; Nash et al., 2017; Smith & Son, 2013), however the intersection of race and perceived pregnancy responsibility has yet to be explored. Although women of all races obtain abortions in the U.S. (Jerman et al., 2016), Black women have a higher ratio of abortions (Jones & Jerman, 2017a), and are more likely to underreport their abortions on survey data (Jagannathan, 2001). As such, there are social inequalities that create invisible subsets of the population who are even more impacted. The proposed study aimed to further illuminate these issues and assess a potential intervention method that can ignite change.

CHAPTER 2: SUMMARY OF EVIDENCE

Abortion is a salient and contentious public health issue in the U.S. Although researchers have referred to abortion as a “common reproductive health event” (p. 224; Moreau, Trussell, Desfreres, & Bajos, 2011) or a “common life circumstance” (p. 238; Steinberg & Russo, 2008), unlike other common medical practices, abortion is deeply politicized. Therefore, abortion discourse is steeped in controversy, misconception, and debate. I will discuss aspects of abortion and its politicization in several subsequent sections. In section 1, I will discuss practices of abortion (i.e., safety and prevalence in the U.S.). In section 2, I will discuss the politics of abortion including legality and cognitive framing. In section 3, I will discuss the affect-based component of abortion attitudes. In section 4, I will discuss current abortion legislation and how knowledge and attitudes affect voting. In section 5, I will narrow the scope to a particular population (i.e., abortion in Arkansas) and need for intervention. In section 6, I will discuss different intervention strategies used in the past to change conditions of and attitudes toward abortion. In section 7, I will describe the current study and in section 8, I will describe the theoretical framework that will guide the methodology and hypotheses.

1. Practices of Abortion

To understand the succeeding sections about politics, attitudes, legislation and voting, specific populations, intervention, and theory, one must first understand the basic concepts of abortion: safety (i.e., *what* obtaining an abortion actually entails) and prevalence (i.e., *who* obtains abortions).

Safety of abortion. An estimated 1.2 million abortions are provided in the U.S. per year; the majority (88.8%) occur during the first 12 weeks of gestation or less), an estimated 10% of abortions occur during 13 to 20 weeks of gestation, and about 1.3% occur at 21 weeks or later

(Finer & Henshaw, 2003; Guttmacher Institute, 2017a; Jatlaoui et al., 2016; Jerman, Jones & Onda, 2016). The risk of serious complications, such as infection or hemorrhage, from abortion is very low at all gestational ages (experienced by less than 0.5% of women in the first trimester; Guttmacher Institute, 2017a). In fact, a woman who continues a pregnancy to term compared to a woman who terminates a pregnancy, is 5-25 times more likely to have serious complications and 14 times more likely to die from pregnancy or childbirth (Raymond & Grimes, 2012). Overall, induced abortion has a mortality rate of 0.7 deaths per 100,000, which is the same rate for spontaneous miscarriage (Hamoda & Templeton, 2010). Risk of death increases with length of pregnancy; at 8 weeks' gestation or earlier, the mortality rate is 0.03 deaths for every 100,000 abortions whereas at 18 weeks or later, it is 6.7 deaths per 100,000 abortions (Guttmacher Institute, 2017a).

There are two main types of abortion methods; both are safe and effective (Kulier et al., 2011). Method use depends on gestational age, physician expertise, and personal and physician preference (Lee, Ng, & Ho, 2010). Though the two types are commonly referred to as “surgical” and “medical” abortion, Weitz and colleagues (2004) argue these terms are confusing and perpetuate inaccurate implications (i.e., “surgical” implies cutting and suturing, “medical” implies physician-based procedures); instead they recommend using “aspiration” and “medication” abortion to imply more accurate depictions of their protocols. Not all procedural abortions include the use of aspiration, however, so “procedural” is a more inclusive term to describe all abortions that are not medication. An additional terminological recommendation discourages the use of describing termination of pregnancy in relation to “trimesters” and instead, encourages using weeks' or days' gestation to be more precise (National Academy of

Sciences, 2018). Therefore, I will use these terms as a commitment to accuracy of language in abortion discourse.

Procedural abortion. The majority of abortions provided in the U.S. are procedural (also referred to as surgical or in-clinic), accounting for approximately 68% of all abortions (National Academy of Sciences, 2018), 72.4% of which are provided before or at 12 weeks and 8.3% of which provided at 13 weeks or later (CDC, 2013). This type of abortion involves a minor procedure to end a pregnancy using a combination of instruments to empty the uterus--the most common instruments used are the curette (i.e., a small metal scraping instrument), dilators (i.e., methods to open the cervix), and vacuum aspiration (i.e., gentle suction). During the Dilation and Curettage (D&C) procedure, a physician may use a combination of these two instruments to empty the uterus. Modern D&Cs, which can be provided as early as 4-6 weeks (O'Connell et al., 2009; National Academy of Sciences, 2018), often use vacuum aspiration instead of or in addition to use of the curette (O'Connell, Jones, Simon, Saporta, Paul, & Lichtenberg, 2009), hence the recommendation of name change to "aspiration" abortion by Weitz and colleagues (2004). The use of vacuum aspiration is considered the safest method with the lowest rate of complications (Hamoda & Templeton, 2010) and comprises two types: manual vacuum aspiration (MVA; generally used during the first 12 weeks; Hamoda & Templeton, 2010) or conventional vacuum aspiration (VA; generally used after 12 weeks; Hemlin & Moller, 2011).

Between the gestational weeks of 13 and 28, the most common method of abortion is a Dilation and Evacuation (D&E) procedure, which often employs the use of VA in combination with other instruments such as forceps (National Academy of Sciences, 2018; Strauss, Gamble, Parker, Cook, Zane, & Hamdan, 2007) and accounts for less than 9% of all abortions (National Academy of Sciences, 2018). D&Es comprise 98.6% of abortions between 13-15 weeks, 95.4%

between 16 and 20 weeks and 85.1% at 21 weeks or later (Gamble et al., 2005). There are two types of D&E procedures: nonintact and intact. These terms refer to the condition of the fetus upon removal (Jones & Weitz, 2009). Intact D&E is sometimes referred to as Dilation and Extraction (D&X) and though not often provided (i.e., about one in every 10,000 abortions; Levit & Verchick, 2016) and typically only in cases of fetal abnormality, they are considered safe and effective (Chasen et al., 2004). Although risk of complications increases as gestational age increases, D&Es are considered very safe procedures and do not impact future fertility, or risk for other pregnancy-related disorders (Jacot et al., 1993; National Academy of Sciences, 2018). To understand common abortion protocols for aspiration procedures before and after 12 weeks, O'Connell and colleagues (2008, 2009) surveyed hundreds of administrators and clinicians in the National Abortion Federation (NAF) and found similarities across facilities; I have described these procedures below:

Aspiration procedures. Prior to the procedure, patients will participate in pre-abortion counseling, a pelvic exam, and methods to confirm pregnancy (e.g., most clinics offer or are required to provide ultrasound; O'Connell et al., 2008; 2009). Prior to abortion, to reduce the risk of complications (Hamoda & Templeton, 2010), clinics administer a cervical ripening agent (e.g., misoprostol) to be taken at home or in-clinic (O'Connell et al., 2009). Choice of instrument for the procedure depends on the physician's preference and, often, when they received their medical training (e.g., older physicians who received their training over 10-20 years ago, were more likely report using a metal curette and less likely to report using MVA during a procedure in the first 12 weeks; O'Connell et al., 2009). The method of anesthesia depends on the provider, with the majority using local anesthesia or a combination of local and intravenous sedation

during a D&C, and the majority using a combination of local and intravenous sedation or deep sedation during a D&E (O'Connell et al., 2008; 2009).

Medication abortion. Scientists developed the abortifacient agent mifepristone (also known as RU-486 or the brand name Mifeprex), a non-procedural abortion method, in the 1980's in France (Crandell, 2012; Hamoda & Templeton, 2010). Today, it is considered to be an important advancement in fertility control (Hamoda & Templeton, 2010), though it was approved by the U.S. Food and Drug Administration (FDA) 12 years after its approval in France. In 2000, mifepristone was approved for abortions up to 7 weeks' gestation (Hamoda & Templeton, 2010; Guttmacher Institute, 2017a; Schaff et al., 2000) and in 2016, the FDA approved a new label to include an additional 3 weeks of administration (i.e., up until week 10 of pregnancy; Guttmacher Institute, 2017b). Medication abortions account for 45% of abortions prior to 9 weeks (Guttmacher Institute, 2017a), though this rate is steadily increasing (National Academy of Sciences, 2018). Medication abortion involves the combination of mifepristone and a prostaglandin analogue (e.g., misoprostol; Hamoda & Templeton, 2010). Mifepristone inhibits progesterone receptors, which causes the lining of the uterus and its contents to shed, and is usually administered orally in-clinic or at home. Some states mandate that clinicians must be in the physical presence of the patient when they take the medication (National Academy of Sciences, 2018). Then a prostaglandin (misoprostol in the U.S.; Lee et al., 2010) is administered 1-3 days later, almost always at home, inducing uterine contractions and expelling the contents of the uterus. Post-abortion, patients return to their physician for an exam to make sure the abortion was complete. The risk of incomplete abortion is low (i.e., 2-4%; Kahn et al., 2000), however, if the abortion is not complete at that time, another dose of misoprostol is administered 4 hours later to ensure all contents of the uterus are expelled (Hamoda & Templeton, 2010).

Cost of procedures. Cost of these procedures are often influenced by gestational age, insurance coverage, and legislative restrictions in the state. Without insurance coverage, the median out-of-pocket cost of an abortion is \$575 compared to median cost with insurance coverage at a range of \$0-18 (Roberts et al., 2014). Furthermore, the price for abortions increases with gestational age--without insurance, an abortion up to 12 weeks costs an average of \$497, abortion between 14-20 weeks' costs an average of \$860, and after 20 weeks, an abortion costs an average of \$1874 (Roberts et al., 2014). Procedures at 13 weeks and beyond are more expensive in general and, on top of the cost of the procedure, they often require additional costs. These costs often result from legislative restrictions that delay abortion (requiring extra travel and lodging) and increase charges (e.g., ultrasound; Bitler & Zavodny, 2001; Drey et al., 2006; Jones & Weitz, 2009). Price related to gestational age applies to abortion services in all states. However, additional costs to the procedure (e.g., ultrasound, services offered in a facility that must adhere to Ambulatory Surgical Center standards, waiting periods that necessitate two trips to the doctor) vary from state to state and depend on the type and amount of restrictions enacted (see Section 4).

Prevalence of abortion. Approximately 1 in 4 women (of all demographic characteristics) will have an abortion by the age of 45 (i.e., 14.6 abortions per 1000 women aged 15-44; Dreweke, 2017; Guttmacher Institute, 2017f; Jones & Jerman, 2017b). The largest groups of abortion patients are in their 20's (34% aged 20-24 and 27% aged 25-29), have never married (46%), were using a contraceptive method (51%), have had at least one birth (59%), are poor or low-income (75%), and over half (54%) of abortion patients report some religious affiliation (17% as mainline Protestant, 13% as evangelical Protestant, 24% as Catholic, 38% no affiliation, and 8% other; Guttmacher Institute, 2017a). When abortion rates are examined by race/ethnicity

(i.e., solely in terms of numbers), it appears they are fairly equally distributed with slightly more White women reporting abortions (39% compared to 28% Black, 25% Hispanic, and 9% other; Guttmacher Institute, 2017a). However, when abortion rates are examined proportional to the subpopulation, White women's abortion rates are the lowest (i.e., 10.0 per 1000) and Black women's rates are the highest (i.e., 27.1 per 1000; Jones & Jerman, 2017b), specifically those who are low-income (Jones and Kavanaugh, 2011). Additionally, many studies indicate women underreport their abortions in population-based surveys (Bajos et al., 2010; Trussell, 2008). Accordingly, abortion rates are linked to socioeconomic status in the U.S., particularly poverty. Yet, poverty is not the sole explanation for these rates--there are unequal rates among low-income women of color (i.e., low-income Black women have higher rates of abortion than low-income Hispanic women do; Jones & Kavanaugh, 2011).

Impact of finances. Paradoxically, low-income women of color, who have the highest rates of abortion, also face the most barriers to access. Finances are simultaneously an indicator of prevalence (i.e., reason for seeking an abortion) and a barrier to access for women. Three-fourths of women cite seeking an abortion for reasons related to the financial impact an unplanned child would have on their life and the life of their family (Boonstra, 2016; Guttmacher Institute, 2017a; Jerman, Jones, & Onda, 2016). As low-income women compose the majority of abortion patients, for more than half of women who seek abortions, provision and travel costs comprise more than a third of their monthly income (Roberts et al., 2014). Although, two-thirds of women report receiving some financial assistance, even with aid, most women pay out of pocket for their abortions and report an average of \$54 for travel with a range of \$0-2200 (Roberts et al., 2014). Consequently, over half of women report that financial issues delayed their care, which could include problems with insurance coverage or needing to raise money for

the costs of provision and travel (Roberts et al., 2014; Upadhyay et al., 2014). Though cost may delay care, women prove to endure many obstacles, and will often defer payments for rent, groceries, and other bills, in order obtain an abortion (Dreweke, 2017).

2. Politicization of Abortion

Despite the safety and prevalence of abortion, the issue of women's reproductive rights (referred to by some as a "war" on women; e.g., di Mauro & Joffe, 2007; Harrison, 2016) has been shrouded in politics (e.g., rhetoric, legislative restrictions) for decades in the U.S. Fluctuations of sexually conservative and progressive movements throughout history have influenced this "war" and resulted in a bipolar cognitive approach to the issue.

Legality of abortion. Abortion was not officially illegal in the U.S. until the Comstock Act of 1873, which criminalized possession of items or information pertaining to contraception and abortion (Levit & Verchick, 2016). This Act was passed in response to a combination of sexist and racist attitudes such as the American Medical Association's position that abortion was in conflict with a woman's martial duties and fears of the general public that upper-middle-class White women were having lower birth rates than women of color (Levit & Verchick, 2016).

Roe v. Wade. A century later, the court cases *Roe v. Wade* and *Doe v. Bolton* legalized abortion in 1973 (Ellison, 2003). Scholars considered this advancement in reproductive rights to be a major public health gain because it led to increased access to abortion and thus safer provision (Cates, 1982). *Roe v. Wade* (sometimes referred to by researchers and activists as just "Roe") laid out a structure of legality by trimester so that 1) a woman and her practitioner had the right to terminate the pregnancy through abortion in the first trimester without legal restrictions, 2) states were allowed to set conditions for second-trimester abortions, and 3) third-trimester

abortions were illegal unless the woman's life or health was in danger (*Roe v Wade*, 410 US 113, 1973). Legalizing abortion allowed for the systematic collection of epidemiological data, which led to better recommendations, better training of physicians, and lower mortality and morbidity rates (Cates, 1982, 2012). Before legalization, abortion provision was unregulated, unsafe, and occurred in secrecy. For example, prior to *Roe*, in 1965, 17% of all deaths due to pregnancy and childbirth were the result of illegal abortion (Gold, 1990). Despite these benefits to legalization, anti-abortion activists worked to decrease access and discourage women from seeking abortion.

Immediately following *Roe*, there was a period of optimism and liberation (Schoen, 2015). During this time, people created a network of freestanding clinics and abortion was cheaper and more accessible than ever with the establishment of abortion fund organizations. In addition, feminists were empowered and women were encouraged to learn about their reproductive choices and options. However, this optimism was halted in the 1980's with the beginning of the current sexually conservative movement (i.e., the Religious Right), a "moral panic" (p. 68) reaction to the women's liberation and gay rights movements (di Mauro and Joffe, 2007).

A swell of Religious Right-affiliated groups (e.g., Focus on the Family, the Family Research Council) activated in the 80's during Ronald Regan's administration (di Mauro & Joffe, 2007). These anti-abortion activists used rhetoric to create a movement that perpetuated fear, stigma, and misconception. In combination with politicians and legislatures, the anti-abortion movement worked strategically to pass restrictions at a state and federal level to infringe on the legal parameters set in 1973. Leaders of this movement created Crisis Pregnancy Centers (discussed below) and drew on findings from a few anti-abortion physicians that declared

abortion was detrimental to women's health, causing infertility, increased risk of miscarriage, uterine rupture, and hemorrhaging (Haugeberg, 2017). They worked to discredit medical professionals who cited scientific evidence that opposed these declarations (i.e., that abortion was safe with very few physical or psychological complications; di Mauro & Joffe, 2007; Haugeberg, 2017). They spread anti-abortion messages with the use of graphic, bloody images of fetuses and histrionic language, coining "junk science" terms (di Mauro & Joffe, 2007, p. 77) such as Post Abortion Syndrome and "partial-birth" abortion (Esacove, 2004; Haugeberg, 2017). This political climate facilitated construction of the dominant cognitive frames of abortion stance.

Cognitive framing of abortion. The dichotomization of abortion framing (i.e., "pro-life" vs. "pro-choice") stemmed from the Religious Right's use of tactics such as stigmatization campaigning and language to create an "adversarial" relationship between fetal rights and maternal rights (di Mauro & Joffe, 2007; Halva-Neubauer & Zeigler, 2010). This cognition is based on knowledge, reasoning, and judgments relating to the relationship of the fetus and/or the woman and how it relates to one's construction of their moral values system.

Before further describing this dichotomization, a note on terminology used in this section: there is discussion and criticisms on both sides that these labels may not accurately reflect the values of their group. For example, out-group critics often equate the term "pro-choice" to "pro-abortion" and therefore perpetuate that "pro-choice" individuals have a negative stance against all pregnancies (Shames, 1988). However, "pro-choice" individuals adopt the term because it implies that women should have access to the full spectrum of pregnancy outcome opportunities (choices), be that they decide to maintain their pregnancy or terminate it. Additionally, as described below, in-group critics argue that the label of "pro-choice" is

insufficient because it ignores the inequality of access to “choice” (e.g., for women of color; di Mauro & Joffe, 2007; Smith, 2005). In attempts to move away from this rhetoric, some activists on this side offer a more precise term such as “supporters of abortion rights” (Feree, 2003). On the other hand, out-group criticism of the “pro-life” label argue its inaccuracy; focusing on the wellbeing (i.e., “life”) of the fetus often ignores the wellbeing/life of the woman carrying the pregnancy (Malik, 2018). “Pro-choice” individuals suggest that labels for those who oppose abortion such as “anti-choice,” or “anti-abortion” are more precise.

While both labels may not be all-encompassing, for unification of language, I will refer to the fetal-centric side as “pro-life” and the woman-centric side as “pro-choice,” as I will discuss their ideologies with language from *their* rationalizations. While certain subgroups of each side have acknowledged the need for shifting the rhetoric, these messages/labels have prevailed for decades, which has been influential in social movements and affects who is heard, how they are heard, and what ideas dominate the discourse (Feree, 2003).

The “pro-life”/fetal-centric frame. In the late 1980’s, these religious fundamentalist groups began promoting the idea that life begins at conception, designating personhood to the fetus and privileging its protection (Ellison, 2003). Under this stance, abortion is conceptualized as an unjustifiable killing of the fetus and should be criminalized under the 14th amendment (i.e., shall not deprive U.S. citizens of *life*, liberty, or property; Halva-Neubauer & Zeigler, 2010; Smith, 2005). In their analysis of anti-abortion rhetoric, Halva-Neubauer and Zeigler (2010) conclude that the “pro-life” movement is “vibrant [and] strategically sophisticated” (p. 117). “Pro-life” groups furthered their cause by using the increased visibility of the fetus through advancements in technology, generating language (e.g., unborn child), hypothesizing consequences (e.g., fetal pain), and creating centers that disseminate their message.

Technology. As pregnancy technology advanced over time (e.g., 4-D ultrasound, fetal photography, post-birth care for premature fetuses, fetal analgesics), fetuses have been conceptualized as an infant/person with emotional and cognitive response (Derbyshire, 2008; Norris et al., 2011). In fact, because premature fetal care is so advanced, Kluge (2012) suggests that, to avoid ethical violation, women who do not wish to carry their pregnancy should transfer their fetuses to incubate in artificial wombs. To increase fetal personhood rhetoric, “pro-life” activists have disseminated materials using high-tech images of in-utero fetuses, which some scholars argue decontextualizes the fetus and exaggerates its independence by erasing the pregnant woman from the picture (Halva-Neubauer & Zeigler, 2010; Taylor, 2008).

Language. Another strategy to perpetuate fetal personhood is the use of language in government documents (e.g., bills) and media (e.g., “unborn child,” “preborn Americans,” “unborn baby”; Harrison, 2016; Mikolajczak & Bilewicz, 2015). A study examined the impact of language on attributing humanness to either a “zygote,” “embryo,” or “fetus” and found no differences between the three terms (MacInnis et al., 2014). However, Mikolajczak and Bilewicz (2015) conducted three studies in which they manipulated whether the participants would see the word “fetus” or “child” in a short text; those who saw the word “child” were more likely to attribute human nature to it in follow-up questions. With the use of personified terms, anti-abortion activists employed initiatives to perpetuate the concepts of fetal homicide (criminalizing third-party killing of fetuses) and fetal pain (Halva-Neubauer & Zeigler, 2010).

Fetal pain. Whether or not a fetus can feel pain has been well debated. Kluge (2012) argues that there is a difference between pain reception and nociception (neural coding in the sensory nervous system that processes potentially harmful stimuli such as extreme temperature or pressure; Dubin & Patapoutian, 2010); by comparing fetuses to non-human animals, who

experience nociception, he presents evidence to support the position that fetuses have nociceptive capacity as well (i.e., indicating that they process noxious stimuli). However, Derbyshire (2008) presents a counter argument--even if fetuses experience nociception, they do not have the brain development to code or label that noxious stimuli as pain. Fetal pain can be divided into two components: neurobiology (i.e., pain processing via response to noxious stimuli) and developmental psychology (i.e., self-location or “you know that it is *you* that hurts”; Derbyshire, 2008, p. 118). Although neurobiological features that could respond to noxious stimuli develop at 7, 18, and 26 weeks’ gestation, the fetus does not have a state of consciousness at those development points to register stimuli as pain; this may not happen until at least 23 weeks (Derbyshire, 2008).

Crisis pregnancy centers. To disseminate these messages (e.g., fetal personhood, fetal pain) and intercept pregnant women who are seeking abortions, the “pro-life” side created a group of non-profits known as Crisis Pregnancy Centers (CPCs). CPCs are funded by a combination of private donors (e.g., proceeds from the “Choose Life” license plates) and state (Ludden, 2015) and federal funds (under the Title V funding for abstinence-only education programs during the Bush Administration in 2010; di Mauro & Joffe, 2007; NARAL, 2010), and currently under Title X funding during the Trump Administration. They pose as medical facilities and attempt to confuse vulnerable women by using vague advertising (e.g., offering “free and confidential services”; NARAL, 2010, p. 6) and situating their buildings within close proximity to actual abortion clinics (Haugeberg, 2017; NARAL, 2010). The volunteers that run CPCs may show gruesome images to pregnant women, warn them of the risks of abortion, conduct pregnancy tests (usually bought over the counter) and ultrasounds, and lie about gestational age results to keep women from going to real clinics (di Mauro & Joffe, 2007;

Haugeberg, 2017). Often, they will collect sexual histories and emergency contact information and inform partners and parents about women's intention to seek an abortion because they are not bound by patient confidentiality (Haugeberg, 2017).

The “pro-choice”/woman-centric frame. In contrast, the “pro-choice” position typically maintains that the fetus is not a person/life capable of feeling pain and, therefore, is not entitled to legal protection under the 14th amendment (Halva-Neubauer & Zeigler, 2010; Smith, 2005). “Pro-choice” activists assert that legislation to alleviate (e.g., with anesthesia) or avoid fetal pain are just strategies to make abortion more expensive and create another barrier to access (Halva-Neubauer & Zeigler, 2010). Though some “pro-choice” individuals may know the potential personhood of the fetus, they advocate that women's personhood should be prioritized, as women's autonomy and their “moral competence to make abortion decisions” are core tenets of reproductive choice (Feree, 2003, p. 314). Under this stance, women's bodies have been “sites of extensive and extended biopolitical contestation” (Ellison, 2003, p. 338) and activists prioritize the need to protect a woman's right to the choice to control her own body (Smith, 2005); abortion is a means to control reproductive outcomes.

Public messaging and policy efforts of the “pro-choice” side pale in comparison to the strategy, organization, and visibility of “pro-life” activists. For example, there are hundreds of websites and sources of media dedicated to women who regret their abortion whereas only a few to “pro-choice” narratives (Ludlow, 2008). This lack of transparency could be because the reproductive rights movement has been forced into a defensive approach, simply to maintain legality instead of focusing on larger, more emphatic goals (di Mauro & Joffe, 2007). The ultimate “pro-choice” goal is affordable, unrestricted access to abortion at any gestational age, free of criticism or stigma (which has been denigrated to the anti-abortion phrase of “abortion on

demand,” implying heartlessness and sterility; Ludlow, 2008). In order to eventually achieve this goal, “pro-choice” activists have, at times, had to pick their battles and rely on politically acceptable reasons for abortion (e.g., rape, incest, health) to relate to those who are undecided or oppose abortion. Instead of putting effort into keeping abortion legal for everyone at every gestational age (e.g., even the less acceptable reasons for abortion such as a woman simply not wanting children), they must water down their arguments so as not to turn people off or stir up controversy (Ludlow, 2008).

Being strategic with “pro-choice” discourse relates to Feree’s (2003) work designating the two sides of the feminist abortion narrative: resonance and radicalism. She argues that “pro-choice” feminists are selective in different “discursive opportunities” (p. 306), choosing to be resonant “for the purposes of influencing policy, gaining public support, and forestalling countermovement attacks” (p. 306) and radical in situations “whose success implies more fundamental change” (p. 306). She goes on to compare these approaches of abortion-rights activists in the United States and Germany and emphasizes the influence of societal context on success of abortion discourse. That is, the individualism of American societal values creates a more successful context for the “pro-choice” argument of women’s right to privacy, whereas the collectivism of German society better receives the argument of social protection of individual rights (Feree, 2003).

Moreover, some of the strategies of the “pro-choice” side intended to help facilitate access to abortion ended up having an opposite effect. For example, “pro-choice” activists originally created freestanding abortion clinics to give women a separate and gender-congruent facility (Creinin, 2000; Jones & Kooistra, 2011). In theory, these clinics should have had the impact for the “pro-choice” side that CPCs have had for the “pro-life” side. However, separating

abortion facilities into freestanding clinics has hurt the reproductive rights cause by marginalizing those who obtain and provide services (Norris et al., 2011). Additionally, there has been criticism from *within* the “pro-choice” movement about its framing and approach, namely that “choice” excludes those that do not have free control over their reproductive options (e.g., poor women, women of color; di Mauro & Joffe, 2007; Smith, 2005). For example, women of color, working class women, and lesbian women indicated a lack of identification with the message of the “pro-choice” movement because the impact of homophobia, racism, and classism is often left out of the conversation (e.g., research, statistics, and activism) regarding obstacles to women’s reproductive health care (Price, 2011). These within-group criticisms create a divided front and leave room for “pro-life” activists to criticize the “pro-choice” side as well (Vanderford, 1989). However, those on the “pro-choice” side have expressed optimism for younger generations of Americans’ heightened “social justice mindedness” in the hope that a “pro-choice” position will become so commonplace, those on the “pro-life” side will have to defend their outdated view (Rovner, 2016).

Conceptualization of the “pro-life”/“pro-choice” rhetoric. The dichotomy of abortion framing has resulted in two polarized sides that hinge on whose protection should take precedence in a pregnancy: “pro-life” individuals believe that protection of the fetus/child should take precedence whereas “pro-choice” individuals believe that protection of a woman’s bodily autonomy should be prioritized. Some say the polarization between the two sides will never result in compromise, whereas others point to their similarities of conceptualization of their attitudes (Smith, 2005; Vanderford, 1989).

Similarities in conceptualization. In Vanderford’s (1989) examination of large, organized “pro-life” and “pro-choice” groups in Minnesota (i.e., Minnesota Concerned Citizens for Life

and Abortion Rights Council of Minnesota), she found that both sides conceptualized the other as simultaneously “powerful and vulnerable” (p. 175). That is, they surmised that the other side was the minority in their beliefs but had un-checked power from powerful resources (i.e., “pro-choice” elites in media, government, and businesses and “pro-life” elites in the church).

Moreover, both sides used the same four strategies to vilify the other: 1) they articulated the other as a specific adversarial force, which clarifies the target, 2) they cast the other in an exclusively negative light, 3) they attributed “diabolical motives” to the other, and consequently, 4) they magnified the other’s power (Vanderford, 1989).

Another conceptual similarity in the “pro-life”/“pro-choice” rhetoric is that both sides cite marginalization of women of color, poor women, and women with disabilities perpetuated by the opposing side (Smith, 2005; Vanderford, 1989). For instance, the “pro-life” side argues that “pro-choice” individuals (especially White, liberals) are paternalistic in their views, see poor Black women as lacking the intelligence or morals to be chaste, and therefore, encourage abortion as a form of population control for people of color (Smith, 2005; Vanderford, 1989). Further, critics argue that the “pro-choice” side’s emphasis on “free choice” and “reproductive rights” obscures the fact that not all women have the same ability to make reproductive decisions (Smith, 2005). For example, some women who seek abortions are more stigmatized than others because of internal biases (Norris et al., 2011) such as women who test positive for fetal abnormalities might experience relief from stigma because of the social norm that children with certain disabilities will have “worthless” lives and can be acceptably aborted (Smith, 2005).

In contrast, the “pro-choice” side argues that the “pro-life” stance restricts abortion access, which disproportionately affects low-income women of color and perpetuates a cycle of poverty and systems of inequality (Vanderford, 1989). Smith (2005) postulates that supporting

the criminalization of abortion would perpetuate white supremacy and capitalism via the prison system. That is, if *Roe* is overturned, as the “pro-life” side favors, women who have abortions will be prosecuted and be incarcerated. This criminalization will heavily impact poor women of color because 1) the prison system disproportionately incarcerates people of color and 2) proportionately, women of color have the most abortions. In fact, there has been a growing movement that focuses on women of color organizing for reproductive justice, as they are disproportionately affected by the outcomes of this debate (Ross, Gutierrez, Gerber, & Siliman, 2016). Smith (2005) contends that women of color activists should develop alternate paradigms to replace the “pro-life”/“pro-choice” rhetoric and address these systems of oppression.

Differences in conceptualization. Both sides see abortion as a socially and morally important issue to be legislated (“either by restrictive or protective measures,” Vanderford, 1989, p. 166). However, both sides may have different foundations for defining and conceptualizing morality and therefore, may never see eye-to-eye (Haidt & Graham, 2007). Haidt and Graham’s (2007) Moral Foundations Theory (MFT) describes five foundations of morality (i.e., 1) harm/care, 2) fairness/reciprocity, 3) ingroup/loyalty, 4) authority/respect, and 5) purity/sanctity) and posits that different groups of people value these foundations to varying degrees, potentially resulting in disjunctive views on social issues. Their analysis of these foundations by political ideology compares moral motivation of liberals and conservatives; they conclude that the first two foundations (i.e., harm/care, fairness/reciprocity), which make up the tenants of autonomy, motivate liberals. In contrast, conservatives are motivated by all five foundations and value autonomy to a point, but also factor in tenants of community (i.e., ingroup/loyalty, authority/respect) and divinity (i.e., purity/sanctity).

These differences in moral foundations can apply to the “pro-life”/“pro-choice” rhetoric as well. There has not been specific research to examine these polarized sides on the difference in their moral foundations. However, “pro-choice” individuals often align with a liberal school of thought whereas “pro-life” individuals often align with conservatives (Begun et al., 2016; Hess & Rueb, 2005; Smith, 2016; Strickler & Danigelis, 2002). Accordingly, “pro-choice” people are motivated by (women’s) autonomy, which concern the first two foundations of morality and “pro-life” people are motivated by all five foundations. For example, regarding foundation 1) harm/care, “pro-choice” and “pro-life” individuals have sensitivity to cruelty and harm but, as stated earlier, they differ on *whose* harm they prioritize. To “pro-choice” people, forcing a pregnancy on a woman who does not wish to be pregnant is mentally and physically harmful whereas “pro-life” people view abortion as cruelty to a helpless fetus. Regarding foundation 2) fairness/reciprocity, “pro-choice” individuals, who often identify as feminists (Levit & Verchick, 2016), are people who prioritize social justice and reproductive rights. Therefore, they deeply value the second foundation of justice and fairness for women. “Pro-life” people may value justice as well but, as Haidt and Graham (2007) point out, “these virtues [related to fairness and justice] can, of course, be overridden by moral concerns from the other four systems” (p. 104). Arguably, “pro-life” individuals endorse foundations related to community and divinity with more weight, which apply to the next three foundations. Regarding these last three foundations 3) ingroup/loyalty, 4) authority/respect, and 5) purity/sanctity, similar to Haidt and colleagues’ (2009) MFT application of conservatives’ moral aversion to homosexuals, “pro-life” people have a moral aversion to women who seek abortions. They are more likely to see women who seek abortions as violating the norms and roles of traditional femininity (e.g., ingroup femininity as purity dictated by the church and the three components of womanhood: sex for procreation,

aspiration for motherhood, and nurturing of vulnerable persons; Kumar et al., 2009). These violations may override a “pro-life” person’s valuing of autonomy (i.e., the first two foundations).

Knowledge of abortion. Beliefs and knowledge about what abortion entails (and how that affects their conceptualization of the fetus) affects part of these cognitive attitudes toward the fetus. As education level links to attitudes (e.g., Kelly & Gauchat, 2016; Smith & Son, 2013; Wang, 2004), some studies have specifically examined knowledge of abortion and/or abortion laws in relation to view or behaviors, although few studies have examined a general U.S. population. Of the few studies that examine knowledge of abortion and laws with general populations in the U.S. (Bessett et al., 2015; Kavanaugh, Bessett, & Littman, 2013; Lara et al., 2015), all revealed that knowledge of abortion (e.g., safety, legality, prevalence) among their samples was low and called for interventions to increase such knowledge.

Moreover, these American studies found evidence of misinformation among participants, including beliefs that abortion is illegal, causes negative health consequences, and confusing the abortion pill and emergency contraception (Bessett et al., 2015; Hickey, 2009; Kavanaugh et al., 2013; Stone & Waszak, 1992). These misconceptions could certainly influence the cognitive side of abortion attitudes. Additionally, scholars have investigated participant characteristics that predict abortion knowledge. Studies indicate that greater knowledge of abortion is predicted by abortion experience (either those who knew someone who had an abortion or those who had had an abortion themselves; Bessett et al., 2015; Lara et al., 2015), more liberal attitudes toward abortion (Bessett et al., 2015; Kavanaugh et al., 2013), less conservative political ideology (Bessett et al., 2015), and higher knowledge of non-abortion sexual health topics (e.g., contraceptives, pregnancy, birth; Kavanaugh et al., 2013). To that end, it is not surprising that

general abortion knowledge is low considering that basic level of sexual health knowledge is low among adults in the U.S. (Frost et al., 2012; Kavanaugh et al., 2013; Volck et al., 2013). As level of sexual health knowledge is often related to states' sex education policies, Bessett and colleagues (2015) examined whether knowledge of sexual health and abortion was predicted by where participants lived (e.g., red state, blue state). However, they found that it was not a significant predictor, indicating that lack of abortion knowledge is not necessarily linked to living in a conservative or liberal state.

In addition to lack of knowledge affecting how attitudes are developed, it can also affect seeking abortion services; many women experience delays in abortion care because they didn't recognize the pregnancy (e.g., lack of reproductive health knowledge) or they didn't know where to find abortion care (either a provider in general or one with proper training; Doran & Nancarrow, 2015; Upadhyay et al., 2014). The combination of abortion identity (i.e. cognitive framing), moral foundation, and lack of knowledge can create cognitive dissonance and take an emotional toll on women who seek abortions (e.g., the affect-based side of abortion attitudes).

3. Attitudes toward Abortion

When examining demographic correlates and identification with these cognitive frames, as one incorporates more social identities (e.g., gender, education level), people do not fall as neatly into one side. Thus, asserting that people can only be "pro-choice" or "pro-life" may oversimplify attitudes. Although equal percentages of the U.S. population report identifying as "pro-life" and "pro-choice" (46% and 49% respectively; Gallup, 2017), research indicates that the public is deeply ambivalent (e.g., simultaneously think abortion is murder and a personal choice) and can identify with both or neither of the "pro-life" and "pro-choice" aspects (Bowman & Sims, 2017). In fact, scholars posit that attitudes are multifaceted and discuss an affective

component in addition to a cognitive component (e.g., Breckler, 1984; Breckler & Wiggins, 1989; Ryffel & Wirth, 2016). Affect-based attitudes include emotions and feelings whereas cognition-based attitudes include beliefs and judgments (Ryffel & Wirth, 2016). Generally, attitudes are based in one component or the other (Ryffel & Wirth, 2016) but attitudes toward abortion are unique in that they include both components. In fact, simplifying a person's attitude toward abortion based on their identification with a cognitive frame (e.g., "pro-life," "pro-choice") would ignore the affective/emotional side of people's abortion attitudes, or the conflict between the "head and the heart" (Kimport et al., 2012; Ryffel & Wirth, 2016). Balancing those components leads to ambivalence and the more influential component often depends on the circumstance.

For example, a cognition-based attitude about abortion may relate to one's belief about whether the fetus is a person. If an individual does *not* believe that the fetus is a person, then different circumstances of pregnancy (e.g., poverty, health) may be irrelevant because their cognitive belief will take precedence and will result in support for a woman's right to choose her pregnancy outcome. In contrast, if an individual believes that the fetus *is* a person, the circumstances of pregnancy may be irrelevant because their cognitive belief will result in opposition to abortion. However, there are circumstances that may be highly emotional and may create caveats to these cognitive beliefs. Circumstances such as rape or if the woman's life is at stake generally elicit high support for abortion in the general population (Mikoajczak & Bilewicz, 2015; Smith & Son, 2013) and, therefore, could override cognitive belief about the fetus. Rape and life endangerment elicit both an affective (e.g., emotions for the woman's safety) and cognitive response (e.g., believing that, to a degree, she was not responsible for her pregnancy or had no choice but to abort). On the other hand, there are circumstances in which

public support is low, such as second- and third- trimester abortions and “elective” reasons (e.g., circumstances not conceptualized as “traumatic”; Cook, Jelen, & Wilcox, 1992; Jones & Weitz, 2009). These circumstances could override cognitive beliefs about the fetus as well. For example, “pro-choice” individuals often have reservations about abortion support after a certain gestational age (Ludlow, 2008).

Indeed, people have always conceptualized “good” abortions (e.g., women who have a “good” reason for abortion; rape, fetal malformation, first time abortion) and “bad” abortions (e.g., women who have a “bad” reason for abortion; selfish women, later gestational age; Norris et al., 2011). These reasons are based on cognitive beliefs (or misbeliefs about fetal development at a certain point) but elicit very emotional responses in some people. Kumar and colleagues (2009) indicate that “suitability for motherhood and acceptability of pregnancy termination is determined by a host of individual characteristics including socio-economic status, occupation, race or ethnicity and age” (p. 628) and Osborne and Davies (2012) denote that supporting these “good” abortions but not “bad” abortions is based on internalized sexism. In fact, even women who have had abortions will distinguish themselves from other abortion patients as having a “good” reason compared to others (Cockrill & Weitz, 2010). The truth is that abortions that stem from “good” reasons are rare; 1% of abortions in the U.S. are from rape or incest, less than 1% are from fetal anomalies, and less than 20% of patients are under the age of 19 (Ludlow, 2008). More often, abortion is because of financial reasons, or lack of readiness, which may not fall under perception of “good” reasoning (Ludlow, 2008).

Affect-based attitudes toward abortion. In addition to how certain pregnancy circumstances make an individual feel, the affective side of abortion attitudes (e.g., emotions and feelings) addresses how individuals conceptualize “good” and “bad” abortions based on their

feelings toward women who seek abortions (e.g., effect of stigma). Additionally, it addresses the perception of the emotional toll abortion and abortion restrictions may or may not take on women.

Feelings towards individuals involved with abortion. A well-studied component of the affect-based side of abortion attitudes involves how people view individuals involved with abortion, specifically regarding stigma. In order to stigmatize a group, others must identify (e.g., label/distinguish) that group's differences (separating "us" from "them"), link those differences to perception of negative characteristics, and then members of the group with those perceived characteristics experiences a loss of status or discrimination (Goffman, 1963; Kumar et al., 2009; Link & Phelan, 2001). Therefore, stigma can result in negative mental health outcomes such as depression, anxiety, or feelings of isolation (Kumar et al., 2009; Macdonald, 2003) and can perpetuate secrecy and shame. These feelings can lead to delays in seeking an abortion, underreporting of abortions, reduction of the number of physicians who opt into training, and increase of unsafe abortions (Kumar et al., 2009; Norris et al., 2011).

Norris and colleagues (2011) point out that abortion stigma is slightly different from other stigmas because it is "concealable" (p. S50). A safe and complete abortion allows for some invisibility because there are no obvious lasting outcomes, which permits women to keep it to themselves (Kumar et al., 2009). Although abortion stigma is concealable to some end, its effects are wide reaching and can apply to many people, whether primary or secondary to the experience. Norris and colleagues (2011) lay out categories of abortion stigma as it affects three populations: individuals who work in abortion provision, women who have abortions, and supporters of women who have abortions.

Individuals who work in abortion provision. Providers and individuals who work in abortion provision experience affiliate stigma, some that is less concealable because it is external (Lipp, 2011; Norris et al., 2011). This external stigma is perpetuated by anti-abortion activists' use of picketing, intimidation, harassment, threats, and acts of violence (e.g., clinic bombings, arson) in attempts to decrease the number of providers (Medoff, 2015). In fact, 84% of clinics have reported at least one instance of harassment, 53% have reported incessant picketing, and 3% have reported bomb threats (Guttmacher Institute, 2017a). Many studies show that those who work in abortion provision worry about the effect of this external stigma on their safety and consequently, it has affected the number of health professionals that are willing to work in abortion provision (Doran & Nancarrow; 2015; Medoff, 2015; Norris et al., 2011). Additionally, for those that work in abortion care, there are internal stigmas among providers, depending on what kind of abortion they are willing to provide (Norris et al., 2011).

A study by Lipp (2011) that examined nurses' and midwives' perceptions of coping with stigma within the context of abortion care, found an importance in providing the impression of normality and discretion within their facility so as to keep from spreading this external stigma to women. Norris and colleagues (2011) point out that even supportive environments, such as abortion clinics, may unintentionally perpetuate these stigmas to women because they are stigmatized environments. Women may feel less comfortable to ask about procedures (e.g., what to expect) and may internalize these stigmas so deeply that they feel even those who work in abortion care are judging them. Kimport, Weitz, and Freedman (2016) discuss how patients may perceive varying support from their physicians based on their own performance of the right normative reactions to their decision (e.g., embracing responsibility, displaying vulnerability).

Physicians experience an unconscious conceptualization of the “legitimacy” of abortions, which can affect the care they provide (Kimport et al., 2016).

Women who have abortions. Women who have abortions face unique stigma. Lipp (2011) parses the sources of a woman’s stigma into two parts: stigma she feels about herself (guilt, shame) and internalization of societal prejudice. In an attempt to avoid societal prejudice, some women become stigmatizers of other abortion patients to distance themselves from women who have abortions for “bad” reasons (Norris et al., 2011). In fact, Ellison (2003) argues that stigmatizing women who have abortions and keeping them silent is a form of “structural violence” (p. 323) and therefore perpetuates the idea that there are “good” and “worthy” women (e.g., married women who become pregnant and have babies) and socially deviant women (e.g., those who are not married, those who end their pregnancies). Likewise, Kumar and colleagues (2009) posit that women who get abortions are marked “as inferior” (p. 628) by violating the three ideals of womanhood/femininity: women must have sex only for procreation, women must aspire to become mothers, and women must act on their instinct to nurture the vulnerable.

Two-thirds of women report anticipating they would feel stigma if others knew that they had an abortion (Norris et al., 2011), therefore they go to great lengths to conceal their abortions, such as paying out of pocket instead of reporting it to their insurance (Jones, Finer, & Singh, 2010) or self-sourcing abortion-inducing drugs (Grossman et al., 2010). When women conceal their experiences, they must cope without a support system; despite the fact that support systems alleviate the effects of abortion stigma so keeping it from others often does more harm than good (Bradshaw & Slade, 2003; Kumar et al., 2009; Norris et al., 2011).

Supporters of women who have abortions. As many women conceal their abortions from their support systems, the stigma felt by partners, friends, and family is understudied (Norris et al., 2011). However, Norris and colleagues (2011) posit these parties may also feel affiliate stigma --male partners of women who have abortions feel many of the same emotions that women feel (e.g., guilt, anxiety, ambivalence). There has been some research exploring the effect of partner pressure to have or not have an abortion and social abandonment on women's reported abortion experiences (Kimport et al., 2011). However, literature on why partners left often focuses on feelings about parenting or finances instead of stigma they felt about being associated with abortion (Kimport et al., 2011). Additionally, Norris and colleagues (2011) speak about the effect stigma has on abortion scholars and activists when attempting to secure funding—they often face difficulty or rejection because of negative associations with abortion and the perception of people who study/support it.

Mechanisms of stigma. Experience of social deviation applies to all three groups; Kumar and colleagues (2009) discuss behaviors/language at every level of an ecological model that perpetuate these stigmas and keep providers, support systems, and women scared and silent. Ecological models are composed of several concentric circles that represent factors/determinants of an issue. The outermost circle includes societal mechanisms that frame discourse, cultural norms, and mass media. At this level, Kumar et al. (2009) discuss the global language of pregnancy termination (e.g., lost, dropped), conflation of fetus and baby, and terms for abortion providers (e.g., abortionists, murderers). The next circle consists of governmental/structural factors such as policies and laws (e.g., global “gag” rules) that perpetuate the deviancy of abortion. Third, the organizational/institutional circle includes the separation of abortion care from other medical procedures, lack of systemic training in medical schools, and problems with

insurance coverage. The second to last circle includes community factors which comprise the loss of community networks for women who have abortions and being labeled negatively (e.g., as promiscuous or worse). Finally, the innermost circle includes individual factors of shame, guilt, feeling selfish or immoral, and the struggle to make sense of an abortion (because of norms of femininity).

Affect-based outcomes after an abortion. Research indicates that women who have had an abortion are at no higher risk of negative mental health outcomes (e.g., anxiety, depression) than levels endemic to the general population; they even report an increase in psychological well-being (e.g., quality of life, life satisfaction, self-esteem) after an abortion (Biggs, Upadhyay, McCulloch, & Foster, 2016; Bradshaw & Slade, 2003; Crandell, 2012; Westhoff, Picardo, & Morrow, 2003). Despite evidence from myriad studies that abortion does not routinely cause negative mental health outcomes, anti-abortion activists assert the opposite in their discourse vis-à-vis Post Abortion Syndrome (PAS); this phenomenon alleges women who have had abortions suffer negative mental health outcomes such as depression, loss of self-esteem, and thoughts of suicide (Haugeberg, 2017). While, the majority of women report neutral or positive post-abortion experiences, there are women who report feeling distress about their decision. Qualitative research with a small sample of women who experienced regret or distress indicated several social factors contributed to these negative feelings; these factors included feeling a lack of decisional autonomy (e.g., influenced or pressured by another person to get the abortion), a lack of social support, and loss of relationships (Kimport, 2012; Kimport, Foster, & Weitz, 2011). These women's narratives align with previous research that indicates perceived abortion stigma or low social support strongly predicts pre-abortion feelings of depression, anxiety and stress

symptoms (Rocca et al., 2015; Steinberg et al., 2016). However, these accounts are rare and contradict much of the literature on pre- and post- abortion mental health outcomes.

Although post-abortion psychological outcomes are generally positive, the factors leading up to making a decision (e.g., unplanned/unwanted pregnancy, partner communication, social deviance) and gaining access to abortion are stress-inducing (Weitz et al., 2008). To examine the extent of these factors on mental health outcomes, Steinberg and colleagues (2016) point out that research is approached from a framework of either 1) abortion is trauma (e.g., examining common risk factors for psychological health such as history of intimate partner violence or mental health conditions) or 2) abortion is a stressful situation (e.g., examining how one copes, sociocultural context, protective factors such as support system or self-esteem, perception of stigma). There are studies that indicate if women do experience negative psychological outcomes (e.g., anxiety, depression), levels are highest right before an abortion and then dissipate or return to endemic levels after the abortion (Bradshaw & Slade, 2003; Rocca et al., 2015; Steinberg et al., 2016). Anti-abortion activists have capitalized on the pre-abortion influx of complicated feelings and stress and use it to perpetuate the looming threat of Post Abortion Syndrome (PAS) with the intention that women will change their minds about having an abortion (Haugeberg 2017).

Some research indicating women experience post-abortion negative mental health outcomes (and confirming the existence of PAS) has been systematically reviewed and found to be methodologically flawed. Typical flaws include failing to incorporate a comparison or control group, incorporating an inappropriate comparison group, or failing to control for confounding variables (Charles, Polis, Sridhara, & Blum, 2008). Methodologically sound studies that examine mental health and abortion often involve a comparison group; that is, they compare women who

have had abortions to women who have carried their pregnancy to term or experienced other pregnancy events such as miscarriage or stillbirth. In these sound studies, overwhelmingly, there were no differences or a very slight decrease in examined psychological outcomes (e.g., anxiety, depression, affect, distress) between the comparison groups (Bradshaw & Slade, 2003; Crandell, 2012; Posavac & Miller, 1990; Steinberg & Russo, 2008; Steinberg et al., 2016). Moreover, for decades, literature has found that women unequivocally report being sure they made the right decision (Rocca et al., 2015) and the most common post-abortion feeling was relief (Bradshaw & Slade, 2003).

Post-abortion attitudes by gender. Though many studies focus on a woman's pre- and post- abortion feelings, some literature examines the feelings of both women and their male partners. In these studies, feelings of distress often differ by gender. In a study examining sources of pre-abortion anxiety in men and women, the main source for women was anticipation of pain (these feelings dissipated after the abortion); however, for men, the main source of anxiety was moral dilemma (Lauzon, Roger-Achim, Achim, & Boyer, 2000). Moreover, male partners of women who have abortions tend to experience negative post-abortion feelings. Coyle and Rue (2015) found that male partners of women who had an abortion reported feeling like a victim or helpless in the decision; many men spoke about loss or grief for their "baby" and looked to religion for forgiveness or healing. It is important to note that this sample was recruited online from Crisis Pregnancy Center websites, likely resulting in a biased sample. That is, men who were feeling distraught by their partner's decision may have sought out opportunities to express their negative feelings, whereas men who felt neutral or experienced feelings of eustress may not have thought to participate in such a study.

Affect-based outcomes after a denied abortion. Although research indicates that women who have abortions are not at a higher risk to experience negative mental health outcomes, women who are denied a wanted abortion *are* at an increased risk of depression and anxiety (Foster et al., 2015). Women who are forced to raise children from unintended pregnancies after being denied a sought-after abortion are more likely to be economically and educationally disadvantaged and their children are more likely to experience negative health consequences (Foster et al., 2018; Gipson, Koenig, & Hindin, 2008; Joyce, Kaestner, & Korenman, 2000; Korenman, Kaestner, & Joyce, 2002; Monea & Thomas, 2011). In contrast, women who seek and obtain wanted abortions compared to those who seek them but are turned away/forced to continue the pregnancy, are more likely to achieve short-term aspirational plans (e.g., educational, employment, change in residence; Upadhyay et al., 2015), more likely to have full-time employment, and less likely to be on public assistance months to years after the pregnancy (Foster et al., 2018). Upadhyay and colleagues (2014) estimate that more than 4000 women in 2008 carried unwanted pregnancies to term because they were denied a wanted abortion. However, it is probable that number has grown in current years given the influx of state-level abortion restrictions.

4. Legislation and Voting

These different attitudinal components toward abortion are core to legislation and voting in response to this perception. Cognition-based attitudes about legislation involve beliefs/knowledge of the law's status, what it entails, and how it practically affects women who seek abortions. The affective side of abortion legislation concerns the emotional aspect for women who seek abortions in states with these restrictions. First, this section will describe a brief timeline of important court cases that led to the current legislative climate for abortion.

Next, I will describe the most common types of abortion restrictions enacted across the nation by detailing the what it entails and in how many states, and the impact it has had on women's access of each restriction category. Then, I will discuss literature that explores general knowledge of these abortion laws. Last, I will discuss practices of and attitudes toward voting on abortion.

Post-Roe abortion legislation. In the last five years, there has been a significant increase in state-level restrictions on abortion; in 2016, 50 new restrictions were passed, resulting in 338 laws restricting abortion in 6 years (Nash et al., 2017). These restrictions were gradually made possible by a series of court cases in the years since *Roe*, which weakened the trimester parameters originally set for abortions in 1973. Only a few years later, in 1977, congress passed the Hyde Amendment, which Boonstra (2016) refers to as the “grandfather of all abortion restrictions” (p. 46). Essentially, this amendment banned federal funding for abortion for women, yet it maintained funds for sterilization and birth expenses (Boonstra, 2016; Ellison, 2003). This action resulted in making reproductive choice a privilege that could not (and still cannot) be easily afforded by women who are low-income, have disabilities, are of Native American descent, prison inmates, or military personnel (Boonstra, 2016; Guttmacher Institute, 2017a).

As time went on, in the late 80's/early 90's, two major court cases changed the nature of abortion access in the U.S. In 1989, *Webster v. Reproductive Health Services* replaced *Roe*'s trimester framework with a focus on viability of the fetus (i.e., interest in potential life; Levit & Verchick, 2016); in 1992, *Planned Parenthood v. Casey* set a new standard that allowed for any restriction of abortion as long as it did not place an “undue burden” (e.g., obstacle) on women (*Planned Parenthood of Southeastern Pennsylvania v Casey*, 505 US 833, 1992). Together, court decisions asserted that the states' interests were in protecting fetal life and opened the door for abortion restrictions (Halva-Neubauer & Zeigler, 2010). Although in 2016, *Whole Woman's*

Health v. Hellerstedt clarified *Casey*'s standards so that courts must strike down proposed restrictions "that do not have tangible benefits" (Guttmacher Institute, 2017a), legislators have still managed to pass restrictions at the state level in multitudes. In fact, during the 2017 legislative session, politicians introduced over 400 bills restricting access to reproductive options, passing 57 of them (Center for Reproductive Rights, 2018).

Types of restrictions. There are several types of restrictions; Medoff (2015) describes them as either affecting the supply-side (e.g., facilities, providers) or the demand-side (e.g., women who seek services) of abortion. Most restrictions aim to delay abortion so that it is either too inconvenient, expensive, or logistically/legally impossible for women to obtain an abortion (Bitler & Zavodny, 2001; Jones & Weitz, 2009). For example, some restrictions drag out the time between pre-abortion counseling and abortion provision, involve parents, require expensive testing (e.g., ultrasound), or supply misleading information to discourage women from their decision (Bitler & Zavodny, 2001; Jones & Weitz, 2009; Vandewalker, 2012). In a national examination of the effect of restrictions intended to delay abortion, Bitler and Zavodny (2001) found that the number of post-12 week abortions increased. This is concerning because abortions 13 weeks and later have a higher risk of complications and death and are more expensive than those before 12 weeks (Roberts et al., 2014).

Conversely, other restrictions actually try to make abortion impossible for women by restricting insurance coverage or requiring burdensome changes to the physical brick and mortar facility (Jones & Weitz, 2009). The Guttmacher Institute classifies 10 major types of abortion restrictions that are enacted across the U.S. (Nash et al., 2017). If a state has four or more of these restrictions, they are considered "hostile" to abortion and if they have more than six, they are considered "extremely hostile." In 2017, twenty-two states were considered "extremely

hostile” and nearly all were in the Southern region (Nash et al., 2017). These ten restrictions will be discussed as they stood in 2017; they typically restrict abortion via requiring parental involvement, pre-abortion counseling, waiting periods, or ultrasounds, prohibiting federal funding, inhibiting private funding, regulating medication abortion and abortion facilities, or restricting abortions based on viability, and preparing for the overturn of *Roe*.

Parental involvement. These restrictions require a minor to obtain permission (i.e., consent) or notification from a parent before an abortion (Bitler & Zavodny, 2001; Guttmacher Institute, 2017c). Twenty-one states require parental consent, 12 states require parental notification, and 5 states require both (Guttmacher Institute, 2017c). Although, minors often do involve parents in their medical decisions, Blasdell (2002) points out that if a minor decides not to involve their parents, they probably have a good reason (e.g., threat of domestic violence, getting kicked out).

There are instances where a minor can petition the court for a judicial bypass (i.e., permission to have the abortion without involving parents) but it is not an intuitive or easy process (Bitler & Zavodny, 2001; Blasdell, 2002). Judicial bypasses are time-consuming and minors face unique burdens with respect to time and transportation (e.g., they would have to skip school, they may not have a car; Blasdell, 2002). Additionally, in order to be granted a judicial bypass, the minor has to demonstrate, via a test, that she is sufficiently mature to have an abortion. Blasdell (2002) points out that if she fails this maturity test, her punishment is denying her an abortion and potentially saddling her with motherhood (an experience that certainly requires maturity). Regardless, in many cases, it is impossible for minors to obtain a judicial bypass (Blasdell, 2002). As for the affect-based side of parental involvement laws, in the end, they either delay or prevent the majority of abortions among minors. Although, in the years

following the implementation of these laws, the overall number of teen abortions decreased dramatically (Blank et al., 1996), rates of abortions 13 weeks and after increased in these states, as did rates of teens traveling to another state to obtain an abortion (Blasdell, 2002). Therefore, these laws often result in increased financial and logistical burden on minors to obtain an abortion while avoiding involving their parents or forced pregnancy.

Pre-abortion counseling. Thirty-five states require pre-abortion counseling and 29 require specific information be disseminated (Guttmacher Institute, 2017g). These restrictions, sometimes referred to as “biased counseling laws” (Vandewalker, 2012), mandate that during pre-abortion counseling, physicians must inform patients about the risks of abortion, often with medically inaccurate or misleading information (Nash et al., 2017; Vandewalker, 2012). Depending on the state, physicians are required to inform patients about risk associated with abortion: infertility, psychological or emotional consequences such as PTSD or thoughts of suicide, or possible link of breast cancer; medical and/or empirical evidence supporting these risks is largely lacking (Vandewalker, 2012). In some states, instead of alleged side effects for women, physicians may be required to describe the developing fetus or embryo using characteristics that apply to development much later in the pregnancy, describe fetal pain, or simply use biased language such as referring to the fetus as the “unborn child” (Vandewalker, 2012). Many outcomes of mandatory counseling laws are discussed in conjunction with the impact of waiting periods (discussed next) as a means to require women to make a separate trip for the abortion after the counseling trip (Joyce et al., 2009). Regarding the outcome of mandating clinics to give certain information to women, some clinics are required to disseminate this information via pamphlet or mail, which clinics report as financially burdensome (Joyce et al., 2009). Additionally, four states require physicians to tell patients in pre-abortion counseling

that a medication abortion can be reversed after the first dose of pills, a statement that is not evidenced by medical research (Guttmacher Institute, 2019; National Academy of Sciences, 2018).

Waiting period. Mississippi enforced the first waiting period law after *Casey* in 1992, which required women to receive (potentially biased; see above) information about abortion and alternatives and then wait a period to “reflect” or “fully weigh their options” before the abortion could be provided (Bitler & Zavodny, 200; Karasek, Roberts, & Weitz, 2016; Vandewalker, 2012). Twenty-seven states have waiting period requirements; most dictate a period of 24 hours but some states require as many as 72 hours to pass between pre-abortion counseling and abortion provision (Guttmacher Institute, 2017g; Vandewalker, 2012). As for the real-world impact of these laws on women, when this waiting period is combined with a restriction that requires pre-abortion counseling to be conducted in person (i.e., ban on “telemedicine” or consultation via video conference), abortion becomes a two-visit process (Vandewalker, 2012), which increases financial and logistical obstacles (Karasek, Roberts, & Weitz, 2016). Joyce and Kaestner (2000) analyzed the years of data preceding and following Mississippi’s 24-hour waiting period and found effects of a delay in abortion services. The proportion of abortions 12 weeks and before decreased whereas abortions 13-24 weeks increased by 45%. Moreover, women who lived closest to an in-state provider compared to those who lived closest to a provider outside of Mississippi, had an average increased gestational age by 4 days at abortion and the number of women who traveled to an out-of-state provider (where there was no waiting period) increased.

Ultrasound. Although an ultrasound can be used to confirm pregnancy in the exam prior to abortion (O’Connell et al., 2008; 2009), these restrictions *require* a “non-medically indicated”

ultrasound before an abortion (Nash et al., 2017) to significantly add to the costs of provision (Guttmacher Institute, 2017h). In the 26 states that regulate the provision of ultrasound, some require physicians to show or describe the image (and/or the developing fetus) and some must provide the opportunity to view their image (Guttmacher Institute, 2017h; Kimport, Weitz, & Foster, 2014). “Pro-life” activists hoped these images would inspire maternal-fetal bonding (Kimport, Weitz, & Foster, 2014). Further, some states require the use of transvaginal ultrasound because it provides a clearer picture of the uterine contents (Vandewalker, 2012).

As for the emotional impact of these laws, research examining women’s reported emotions, perceptions, and experiences viewing their ultrasound before an abortion found conflicting results; some research indicated that women found it to be a positive experience because they were relieved that it didn’t “look like a baby” and confirmed their decision (Wiebe & Adams, 2009). In contrast, some research found that women had mixed feelings: some were positive, some neutral, and some negative. A study by Kimport and colleagues (2014) noted that women who went to clinics where they were required to offer an ultrasound viewing were more likely to report negative feelings; women may have seen the offer as a recommendation instead of an option and felt that practitioners were imposing their beliefs onto them. Despite restrictions that intend to use ultrasound to discourage women from having an abortion, research shows that this tactic is generally ineffective in changing women’s minds (Wiebe & Adams, 2009) but substantially increases financial barriers for women (Guttmacher Institute, 2017h).

Federal funding. Restriction on coverage of abortion by federal funding has been in effect since the implementation of the Hyde Amendment in 1977. Although at a federal level, public funding, such as Medicaid, for abortions (with the exceptions of life endangerment, rape, or incest) is restricted, states are allowed to opt in with their own, nonfederal funds; only

seventeen states have these opt in policies that allow for Medicaid funding for abortion (Bitler & Zavodny, 2001; Guttmacher Institute, 2017d; Nash et al., 2017; Roberts et al., 2014). However, research examining the practicality of these exceptions to restrictions on Medicaid coverage (e.g., implementation of state subsidized funds, coverage in the event of rape, incest, or life endangerment) reveal substantial barriers.

For example, Bessett and colleagues (2011) conducted interviews with women who tried to use these state subsidized funds to cover their abortions and found that the majority of women were not able to access the funds in a timely manner, causing delays on provision and limiting women's ability to obtain a medication abortion. Similarly, Dennis, Blanchard, and Cordova (2011) found in their interviews with individuals who were eligible for the exception (e.g., experienced rape, incest, or life endangerment) and attempted to get their abortion covered by Medicaid, that women had to navigate a complicated process of paperwork and filing claims. They estimated that of the 1165 women who reported that they should have qualified, only 429 women were reimbursed. Of these women who received reimbursement, they described employing strategies that they perceived to influence their success, such as developing relationships with Medicaid staff and facility staff that were experienced in billing processes, and participating in legal action to force Medicaid to pay. However, these strategies are more time-consuming and are not an option for all low-income individuals, thereby limiting their options to use Medicaid to cover abortions, regardless if they experienced rape, incest, or risk of life endangerment (Dennis et al., 2011).

Dissimilar to other research examining effects of abortion restrictions, there are fewer recent research studies that clearly examine pregnancy outcomes as a result of Medicaid coverage restrictions. Some research shows that these restrictions delay abortions or decrease

abortions among teenagers, but long term effects are difficult to elucidate (Henshaw, Joyce, Dennis, Finer & Blanchard, 2009). Older data suggests an estimated 20-25% of abortions will simply not take place among women who receive public assistance who cannot afford provision and its associated costs (Blank et al., 1996). Instead, woman will be forced into carrying the pregnancy to term; this is more likely to be the case among young, low-income, women of color (Blank et al., 1996; Cook et al., 1999). However, as Henshaw and colleagues (2009) point out in a literature review of studies addressing outcomes of Medicaid restrictions, many studies on this subject were conducted 30-40 years ago and had weak methodology because there are myriad confounding variables.

Private funding. In addition to restrictions on federal funding, 25 states prohibit private insurance from covering abortion or require companies to charge for an extra plan or higher premium to cover abortion (Guttmacher Institute, 2017d; Nash et al., 2017; Roberts et al., 2014). In 2010, under the Affordable Care Act, the Obama administration designated state-level assistance for individuals and small businesses to buy private health insurance for themselves and their employees (which covered an array of medical procedures that theoretically included abortion). However, some states responded to this action by passing laws that restricted private insurance coverage to make sure no federal funds went to abortion. In states with these restrictions, private insurance is either not allowed to cover abortion at all (some states exclude the exception of rape, incest, life endangerment), or members must pay a separate premium, referred to by some anti-choice legislators as an “abortion surcharge” (Guttmacher Institute, 2017d; Hasstedt, 2015).

Medication abortion. Some restrictions impose medically inappropriate regulations on medication abortion protocols in attempts to make them inconvenient or less accessible for

women, especially those who live in rural areas (Nash et al., 2017; Guttmacher Institute, 2017b). Thirty-four states require a licensed physician (i.e., not an advanced practice clinician such as a nurse practitioner) to prescribe abortifacient medication (e.g., mifepristone and misoprostol) and 19 states require the pre-abortion counseling be conducted in person (Guttmacher Institute, 2017b). That is, some states prohibit the use of “telemedicine” with medication abortion, which requires women who do not live close to a facility (women in 87-90% of U.S. counties; Guttmacher Institute, 2017a; Jones & Kooistra, 2011) to make two trips to the clinic or stay extra days in the clinic’s vicinity (Guttmacher Institute, 2017b; Vandewalker, 2012). Grossman and colleagues (2011) investigated success of medication abortions comparing those who met with their doctor via telemedicine versus face-to-face and found no differences in efficacy. Additionally, during pre-abortion counseling, four states require physicians to tell patients inaccurate information about the medication abortion (i.e., that it can be reversed after the first dose of pills; Guttmacher Institute, 2017g). Claims of reversal using a progesterone treatment were initially based on results from a small number of patients ($n = 7$) that received varied sizes of doses; research investigating the efficacy of these claims found a lack of consistency in these treatments (Grossman et al., 2015; National Academy of Sciences, 2018). Most recently, Delgado et al. (2018) published a larger study claiming successful reversal of the effects of mifepristone. Grossman and White (2018) rebutted this article maintaining that this treatment is inconsistent and laws promoting it “essentially encourage women to participate in an unmonitored research experiment” (p. 1491).

Abortion facilities. In an effort to diminish the “supply-side” of abortion (Medoff, 2015) and drive out abortion providers (Medoff & Dennis, 2011), some states have enacted very specific and medically unnecessary regulations for abortion facilities; these are often referred to

as TRAP laws (Targeted Regulation of Abortion Providers; Guttmacher Institute, 2017i; Nash et al., 2017). For example, some states require providers to have admitting privileges or be within a certain distance to a hospital. These procedures seem to exist only to create barriers because less than 0.03% of patients experience major complications that would require a hospital (Guttmacher Institute, 2017i). In order to have admitting privileges, many hospitals require clinics to admit a certain number of patients per year. This minimum is difficult to impossible for clinics to reach because of the low risk of abortion provision (Gold & Nash, 2013).

In addition to admitting privileges, many TRAP laws require facilities to adhere to Ambulatory Surgical Center (ASC) standards (Jones & Weitz, 2009). An ASC is appropriate for “sophisticated” surgical procedures and overnight hospital stays--neither of which often apply to common abortion provision (especially medication abortions, the majority of which occur at home, yet ASC standards apply to facilities that offer this option in 17 states; National Academy of Sciences, 2018). These standards include specific augmentation of: hallway and doorway width, rate of airflow, number of parking spaces, staffing (e.g., there must be 1 registered nurse (RN) to oversee all nursing staff and another RN for every 6 patients in the facility), and other costly regulations such as specific outdoor landscaping (di Mauro & Joffe, 2007; Jones & Weitz, 2009). Regarding the impact of these laws on abortion practices, there have been no differences in abortion outcomes (e.g., safety, efficacy) between facilities that are up to ACS standards compared to those that are not. Instead, in order to adhere to the new requirements, services at ASC clinics are more expensive (Jones & Weitz, 2009). Additionally, TRAP laws caused many clinics to close because they could not keep providers on staff with hospital admitting privileges or find locations within the required vicinities (Guttmacher Institute, 2017i). However, when *Whole Women’s Health v. Hellerstadt* was passed in 2016, laws such as these that caused clinics

to close were ruled unconstitutional and therefore courts were able to temporarily block them from being enacted (Center for Reproductive Rights, 2018). Though this was a monumental step in retaining reproductive options for women across the country, it remains to be seen what the long-term impact will be.

Viability. Many states have passed an unconstitutional ban on abortion before viability (i.e., “the point at which a fetus can survive outside the uterus”; Guttmacher Institute, 2017a) or limit abortion after viability (Nash et al., 2017). Many of these restrictions apply to late-abortions but several states are currently trying to ban the dilation and evacuation procedure in its entirety; four states have passed a ban on D&E procedures (Nash et al., 2017). Forty-three states have imposed prohibitions after a certain point in pregnancy (e.g., fetal viability, third trimester) and 22 states require the involvement of a second physician (i.e., attendance or certification of medical necessity) during a late-abortion (Guttmacher Institute, 2017j).

Preoccupation with late-abortions gained attention with the use of “partial birth” discourse when describing these abortions in the 2000’s (di Mauro & Joffe, 2007). In 2000, the court case *Sternberg v. Carhart* attempted to ban the “intact” dilation and evacuation/dilation and extraction (D&X) procedure but the Supreme Court ruled the ban as unconstitutional and, therefore, the procedures remained legal (*Stenberg v. Carhart* 530 U.S. 914, 2000). However, the appointed judges of George W. Bush reheard the case in 2007 as *Gonzales v. Carhart* and ruled that it was *not* unconstitutional, resulting in a ban on “intact” procedures with the exception of life/health endangerment, rape, or incest depending on the state (di Mauro & Joffe, 2007; *Gonzales v. Carhart*, 127 S.Ct. 1610, 2007; Guttmacher Institute, 2017j). These exceptions to the ban, such as the health exception, are often rare occurrences, meaning that most women will not be able to obtain a late-abortion (Ludlow, 2008). However, scholars in countries where abortion

is banned altogether (with exceptions such as health and life of mother), have discussed the health exception as a gateway to more liberal interpretation. That is, having this loophole could improve access if physicians were to apply the exception to any physical, mental, or social “risk” to women’s health instead of waiting until harm has occurred (Gonzalez & Velez, 2012). Regardless, some “pro-choice” activists argue that limiting abortion to “emergencies,” such as victims of rape or violence, re-victimizes those women (Ludlow, 2008).

Overturn of Roe v. Wade. With the current presidential administration’s ideology on abortion, some states have enacted restrictions of abortion in preparation for an event in which *Roe v. Wade* could get overturned (Nash et al., 2017). Eighteen states have declared their intent to ban abortion in virtually all circumstances or retain bans that were in place before *Roe*, whereas eight states assert that if *Roe* falls, they would operate under the same parameters they are operating under now such as the trimester framework dictated by their state (Guttmacher Institute, 2017e). That is, some states have passed these laws to protect women from interference with their reproductive decisions at the state level, regardless of the status of the federal precedent (Center for Reproductive Rights, 2018).

States that have passed policies that would protect the right to abortion in the absence of *Roe* include states on the west and east coasts (i.e., California, Connecticut, Delaware, Hawaii, Maine, Maryland, Nevada, and Washington; Guttmacher Institute, 2017e). Those who support overturning *Roe* may rationalize their stance by telling women who seek abortions to go to states where it is legal. However, these laws would increase travel and costs for women who live in states in the middle of the country that would prohibit abortion in a post-*Roe* world. Not coincidentally, these states that would ban abortion if *Roe* fell, coincide with states that have conservative laws on sexual education and lack of access to contraceptives (Fey, 2018), which

would mean women would not have an accessible way to keep from getting pregnant or to terminate a pregnancy.

Currently, the dangers of overturning *Roe v. Wade* or imposing numerous restrictions such that abortion is not practically accessible can be observed in countries where abortion is still not legal. Women will continue to seek abortions despite status of legality as demonstrated in other countries; almost 20 million women a year undergo unsafe abortions worldwide, the majority of which live in the developing world (Sedgh, Henshaw, Singh, Ahman, & Shah, 2007; World Health Organization, 2007). Untrained providers provide illegal abortions in unclean conditions and many women must go to a hospital afterwards to complete the abortion or treat heavy bleeding, sepsis, or intra-abdominal injury (Kitulwatte & Edirisinge, 2015).

Even now in the U.S., reports of women self-sourcing abortion have increased, especially in places where abortion is heavily restricted (e.g., ban on telemedicine) or stigma/harassment is rampant (Grossman et al., 2010). Almost 10 years ago, Grossman and colleagues (2010) conducted a qualitative examination of women who reported a self-induction attempt which indicated that they did so by taking medications or substances (oral contraception, injections, laxatives, beverages, plants), inserting objects into or using force to damage the uterus, and increasingly, using non-prescribed misoprostol to induce uterine contractions. Of the 30 women interviewed in the study, only 3 were successful in their attempt (all successful completions used misoprostol) and the rest experienced a range of bleeding, and injury, resulting in hospital admittance (Grossman et al., 2010). Experimenting with different substances (e.g., laxatives) and inserting objects into the uterus to induce abortion are dangerous strategies and can result in negative health outcomes; these cases will only increase if the U.S. Supreme Court rules to overturn *Roe*.

However, there has been an increase in research to examine self-sourcing or self-managing of medication abortions (i.e., women purchasing misoprostol or misoprostol in combination with mifepristone online to terminate their pregnancies). Recent research analyzed the efficacy of many websites that offer abortion pills (i.e., by buying said pills, examining intactness of packaging, and sending them to a lab to test for chemical makeup) and determined that the majority of the websites and pills were legitimate (Murtagh, Wells, Raymond, Coeytaux, & Winikoff, 2018). Murtagh and colleagues (2018) concluded that self-sourcing was a viable option and could result in successful abortions (as many women do not need an ultrasound or clinician to take the pills and many do so at home anyway; Jelinska & Yanow, 2018). While, Aiken (2018) expresses wariness that some of these websites may not have adequate information to understand risks or recognize complications and do not offer sources of support, advocates and researchers realize that this could be a new realistic frontier for access, especially in a post-*Roe* world (Aiken, 2018; Jelinska & Yanow, 2018; Murtagh et al., 2018).

Restrictions for physicians. Abortion restrictions that target physicians who provide abortions are not technically on the Guttmacher Institute’s list of 10, however, these laws in conjunction with the aforementioned restriction categories affect the provision of abortion in many states. Legislation regulates how, when, and where abortions may be provided. Additionally, there are “physician-only” laws that limit who can administer services. Several states prohibit both procedural and medication abortions from provision by advanced practice clinicians (i.e., certified nurse-midwives, nurse practitioners (NP), and physician assistants (PA)). There is limited to no medical basis for these restrictions given that these providers have the necessary and relevant skills to administer these procedures with the same risk of complications compared to physicians (Taylor et al., 2009; Weitz et al., 2013). Allowing these

health professionals to provide abortions would improve access, especially for low-income and women of color, as they are more likely to be cared for by NPs and PAs in public health departments or community health centers (Grumbach, Hart, Mertz, Coffman, & Palazzo, 2003; Schacht, 2008; Taylor et al., 2009; Weitz et al., 2013). Further, many states have given physicians an out with “conscientious objection” laws, which dictate that physicians can refuse to administer medical processes (e.g., filling prescriptions for birth control, abortions) if they cite “a moral, ethical, or religious objection” (Meyers & Woods, 1996, p. 115), decreasing the pool of willing providers. Forty-five states have these laws that allow health care providers to refuse to provide abortion services (Guttmacher Institute, 2018a) There has been much debate regarding these laws and Savulescu (2006) argues that physicians who cite these objections must ethically ensure that there are sufficient doctors willing to provide the service they are refusing. Given the scarcity of abortion providers, there is little room for objecting physicians.

According to Vandewalker (2012), moral opposition is at the heart of all abortion restrictions. He argues that abortion patients face infinitely more regulations than patients who undergo other procedures with similar “risk profiles” (p. 7) and these restrictions are a form of gender discrimination in that they only apply to women. Moreover, Vandewalker (2012) argues that restrictions which require or encourage physicians to be paternalistic and impose their own morality onto a woman’s decision (e.g., biased counseling laws, conscientious objection) violates the tenets of informed consent (a patient should have access to all of the correct information prior to deciding a procedure) and the three principles of health care: respect for autonomy, beneficence, and justice.

Knowledge of abortion laws. In addition to low knowledge of abortion, many studies have found low awareness of U.S. abortion laws (Cockrill & Weitz, 2010; Gondor et al., 1996;

Lara et al., 2015; Stone & Waszak, 1992; White et al., 2016). A qualitative study about women's knowledge of state abortion laws revealed that even those who had had an abortion in that state, did not have an increased awareness of the laws (Cockrill & Weitz, 2010). Lara and colleagues (2015) explored low-income immigrant women of color's knowledge of abortion laws and found significant effects on correct knowledge by their recruitment city (i.e., New York, Boston, San Francisco), higher education level, generational status (i.e., second or third generation), and the language spoken at home (i.e., English). Another study examined Texas women's awareness of Texas abortion laws and found that the majority of women (75%) were not aware of the laws; of the women who were aware, only 19% supported them and 46% were not sure how they felt (White et al., 2016). A large public opinion poll by PerryUndem and Vox Media asked 1,060 registered voters across the country about various aspects of abortion and found that the majority (60% and over) were not sure if the listed abortion legislations applied to the U.S. (insurance coverage, who could provide them, clinic standards, ultrasound). Further, almost half of the sample (46%) reported they did *not* think there was a law that would make doctors give medically inaccurate information, demonstrating that awareness of laws is low and knowledge is inaccurate.

Knowledge of abortion and laws is low, yet, the majority of Americans (59%) also think abortion laws should be made much more or somewhat more strict (Bowman & Sims, 2017). Large national polls (e.g., Gallup) show that the majority of people (70% and higher) favor 24-hour waiting periods, parental consent for minors, and doctors informing patients of alternatives or "possible risks." However, regarding the latter, it is possible that when answering these questions, they assume that physicians would only inform them of "possible risks" grounded in medical evidence. Given the low level of abortion and legislation knowledge, people likely do

not know that these “risks” (e.g., breast cancer, negative psychological health outcomes) are not supported with medical evidence. To that end, polls that ask about support for “partial birth” abortions should be subject to the same critique as they are potentially capturing attitudes based on inaccurate information. In large national polls, 60-70% of the samples reported they thought “partial birth” abortions should be banned, but only 45-50% reported support for “bans at 20 weeks” (Bowman & Sims, 2017). While these percentages are still high, it remains to be seen whether or not the general population are aware of what fetal development looks like around 20 weeks and if their attitudes would stay the same if they did.

Weitz and colleagues (2008) comment that some people report being in favor of certain laws (e.g., mandatory counseling laws) because they believe they benefit women’s health (e.g., lessens the harm of abortion on women’s mental health outcomes). Weitz et al. (2008) give the example of mandatory waiting periods and how someone people may think it gives women time to make an informed decision when actually it delays abortion, makes the experience more expensive (e.g., travel, lodging), and may even result in seeking illegal abortion instead. Therefore, support for abortion restrictions may not be because people oppose abortion- but because they are not privy to the affect-based side of abortion restrictions (i.e., what they really mean for women).

Voting on abortion. With a lack of knowledge on abortion and abortion laws but, in some cases, an overestimation of knowledge (Kavanaugh et al., 2013), studies have examined how attitudes and knowledge are intertwined with voting behaviors. Voting on abortion has been examined through the lens of political party, characteristics of legislators, and comparing the views of constituents and legislators.

Political party. In the 80's, national political parties formalized their "issue ownership" of abortion resulting in democrats as the "pro-choice" party and republicans as the "pro-life" party (Highton, 2004; Jelen & Wilcox, 2003) but Adams (1997) points out that these have not always been each party's stance. In fact, in years' prior, republican masses were more "pro-choice" and democratic masses were more "pro-life" in their ideology. He posits that, gradually, "elites" in politics (e.g., candidates, political staff) dictated their party's abortion view regardless of their corresponding constituency's stance, indicating that views on abortion run from elites to masses instead of elites representing their constituencies (Adams, 1997; Jelen & Wilcox, 2003).

Legislator characteristics. In most cases, partisanship dictates a legislator's issue position but abortion attitudes seem to be less predictable. Studies have indicated that legislators often divorce their party's position on abortion and vote based on their own characteristics (e.g., religious affiliation, gender) instead of characteristics of the constituencies or national party (Highton, 2004; Jelen & Wilcox, 2003; Richardson & Fox, 1972; Schechter, 2003). For instance, male legislators are more likely to vote "pro-life," legislators from an urban area are more likely to vote "pro-choice," and Catholic and Jewish legislators are more likely to vote "pro-choice" (Oldmixon & Hudson, 2008; Schechter, 2001).

Additionally, morality could be a foundation for voting behaviors related to social issues. Haidt and Graham's (2007) Moral Foundations Theory posits that liberals and conservatives differ on social issue stance because they consult different components of morality. That is, autonomy (harm/care and fairness/reciprocity) motivates liberals and therefore social justice is half of their moral motivation. Conservatives are motivated by autonomy, community (ingroup/loyalty and authority/respect), and divinity (purity/sanctity) and therefore social justice is one-fifth of their moral motivation and may be obscured by other values. Haidt and Graham

(2007) discuss what these motivations mean for each political group's issue stance and, for example, suggest that "avoidance of carnal pleasures" (p. 101) as a principle of purity/sanctity is an equal factor in morality for conservatives. As abortion is an outcome of pregnancy, which is a result of sex, this principle might be a source of conflict for conservatives when considering their abortion stance.

Despite the influence of these personal characteristics, Schecter (2003) postulates "legislators are in a constant balancing act concerning constituent influences, private influences, and how they perceive their own roles as state representatives" (p. 62). To explore these influences, Medoff and Dennis (2011) analyzed predictors of TRAP law enactments and found that they were not enacted as a result of high abortion rates in the state, religious make-up of the constituency, public anti-abortion attitudes, or state ideology. Instead, the political ideology of the legislators was a significant predictor of whether TRAP laws were in effect (i.e., republican was positively associated with TRAP law enactment and democrat was negatively associated; Medoff & Dennis, 2011). Therefore, even though they may be balancing influences from many parties, research indicates that legislators' own interests often weigh in the most dominant. Given that it appears the majority of people (80%) believe women should have access to abortion under at least some circumstances when asked on surveys (Bowman & Sims, 2017; Smith & Son, 2013), yet state-level legislation continues to restrict access, there seems to be a schism between constituents' abortion opinions and state legislatures. Either legislators are not listening to constituents' attitudes toward abortion or certain constituents are failing to vote with abortion views in mind, or failing to vote at all.

Legislator vs. constituents. Interestingly, the most mobilized people in America on the subject of abortion are those who are opposed to it, a phenomenon that began in the 70's around

the time of *Roe*, often through church congregations (di Mauro & Joffe, 2007). Still, only a small to moderate portion (27-43%) of the population report abortion views are “very” or “extremely” important regarding which candidate to support and this portion tends to be predominantly anti-choice (Bowman & Sims, 2017). One might assume that abortion is a “woman’s issue,” which may have an impact on the fact that women are more likely to factor their stance into voting behaviors (Simon et al., 2010). Regardless, abortion is considered by national polls conducted by Pew Research Center a “lower tier issue for both men and women” with 52% of women and 38% of men considering it an important issue (Chaturvedi, 2016) . Even if people report that it is in an important issue, only 5% said it was the single most important factor for candidate selection (59% indicated “the economy” as the most important issue) and only 20% reported they would only vote for a candidate that shared their abortion view, with more “pro-life” respondents reporting this than “pro-choice” (Bowman & Sims, 2017). Interestingly, in a recent Gallup Poll, 63% of “pro-life” adults reported that were unfamiliar with Donald Trump’s abortion views (Saad, 2016).

Even though attitudes about abortion are generally supportive under at least some circumstances, the majority of people think it should be restricted in some way. Yet, knowledge of abortion and laws are low indicating that they may think abortion restrictions are good in theory but lack the understanding of their impact on women, especially low-income women of color, who have to adhere to these laws. For example, parental consent laws have high endorsement in large national polls (Bowman & Sims, 2017) but to our knowledge, no studies have explored whether people are aware of factors/consequences that go into a minor being required to tell a parent they are pregnant and ask for their permission to get an abortion. We wonder if endorsement would be as high if people factor these consequences into their stance.

Therefore, we aim to test whether residents know what restrictions are in their states and whether they approve of those restrictions in an “extremely hostile” state (i.e., Arkansas) with myriad restrictions to choose from; then, after an intervention that educates them on restrictions on their implications for women, we aim to test if their knowledge and attitudes change.

5. Abortion in Arkansas

Although overall abortion rates have decreased nation-wide (Dreweke, 2017), rates in Arkansas have increased in recent years from 7.6 to 8.0 abortions per 1,000 women of reproductive age (Jones & Jerman, 2017a). Yet, Arkansas is among the top three states in the U.S. with the most abortion restrictions (22) passed between 2011 and 2015 (Guttmacher Institute, 2016b) and introduced more anti-abortion bills than any other state during the 2017 legislative session (Center for Reproductive Rights, 2018). It is considered an “extremely hostile” state with restrictions in 8 of the 10 major categories (Guttmacher Institute, 2017k; Nash et al., 2017):

- **Parental involvement:** Yes, Arkansas minors must provide consent from a parent prior to abortion.
- **Pre-abortion counseling:** Yes, Arkansas physicians must give information on fetal pain to women who are 20 weeks’ gestation or further (which is prohibited with exception of life endangerment, rape, or incest).
- **Waiting period:** Yes, women must wait 48 hours between pre-abortion counseling and abortion provision in Arkansas.
- **Ultrasound:** No, Arkansas does not require a non-medically indicated ultrasound before an abortion.

- **Federal funding:** Yes, Medicaid funding of abortion in Arkansas is banned except in cases of life endangerment, rape, or incest. Additionally, Arkansas does not use state funds to cover low-income women enrolled in Medicaid.
- **Private funding:** No, Arkansas does not restrict abortion coverage in private health insurance plans.
- **Medication abortion:** Yes, Arkansas imposes medically inappropriate restrictions on medication abortion such as physicians must give inaccurate information on reversing medication abortion and pre-abortion counseling must be provided in person (i.e., ban on telemedicine).
- **Abortion facilities:** Yes, Arkansas enacted a law that requires ASC standards of their facilities, however they are temporarily blocked while in litigation (Center for Reproductive Rights, 2018).
- **Viability:** Yes, Arkansas prohibits abortion after 20 weeks except in cases of life endangerment, rape, or incest and if such an exception occurs, a second physician must be present at viability during the abortion. This law is currently blocked while it is in litigation (Center for Reproductive Rights, 2018).
- **Overturn of *Roe v. Wade*:** Yes, Arkansas has expressed intent to limit abortion to the maximum extent permitted.

Consequently, Arkansas' myriad restrictions have resulted in only three facilities in the entire state (Cartwright, Karunaratne, Barr-Walker, Johns, & Upadhyay, 2018) able to provide abortion services for approximately 600,000 women of reproductive age (i.e., 15-44; March of Dimes, 2019). In addition, the restrictions deprive 97% of Arkansas counties the ability to maintain facilities that can offer abortions, and leaves 77% of women in Arkansas without an easily

accessible facility in their county (Jones & Jerman, 2017a). Facilities are only available in Washington County (i.e., Planned Parenthood- Fayetteville Health Center, which only offers medication abortion) and Pulaski County (i.e., Little Rock Family Planning Services, Planned Parenthood- Little Rock Health Center).

In Arkansas, a state that is 79.4% White, 15.7% Black, and 7.3% Latino/a (United States Census Bureau, 2016), a disproportionate number of low-income residents are people of color (i.e., 28.9% Black and 26.7% Latino, whereas only 14.1% White are low-income; Center for American Progress, 2017). Therefore, at a state level, restrictions placed on abortion have the ability to disproportionately impact Arkansan women of color, a segment of the population already at increased risk for experiencing unintended pregnancy (Arkansas Department of Health, 2010). Research examining Arkansans' knowledge and attitudes toward abortion restrictions (and their impact on low-income women of color) is lacking. A qualitative study with Midwestern and Southern women recruited from facilities that offer abortion suggested that they had high concern for women's equality and did not approve of restricting abortion for poor women (Cockrill & Weitz, 2010). However, a more representative national sample through the Gallup poll indicated that 40% favored prohibiting health clinics from receiving "federal funds," which directly affects poor women (Bowman & Sims, 2017).

Although Arkansas is portrayed as a "red" state, and in the most recent election, about 60% of Arkansans voted republican for president, senators, and house representatives (New York Times, 2017), only 53.1% of Arkansans actually voted (McDonald, 2016). Further, according to a study assessing a convenience sample of young adults from Arkansas and Oklahoma, approximately 67.7% indicated support for abortion access (Jozkowski, Crawford, & Hunt, 2018), which is similar to national rates of abortion support (Smith & Son, 2013). Similarly,

according to the Arkansas Poll (2017), a phone survey of residents from across the state on political issues, about 60% of Arkansans thought abortion should be legal under at least some circumstances (Parry, 2017), which may suggest that Arkansans are not as “red” on abortion as state abortion restrictions might suggest. Yet, data on voting according to abortion stance indicates that many Arkansans fail to see it as important or critical. Furthermore, no studies have explored Arkansan’s knowledge and/or support for abortion restrictions in their state, which may affect importance of abortion as a voting issue. Therefore, there is need to examine baseline knowledge of and support for abortion restrictions in Arkansas, particularly for the majority of Arkansans that support abortion access under at least some circumstances but may fail to see it as an important issue in candidate selection or lack the knowledge to make an informed decision.

6. Interventions with Abortion

With much public scrutiny and legislative opposition, many facets of abortion require intervention or improvement at either a macro-level (e.g., waning number of providers, barriers to access due to restrictions) or a micro-level (e.g., reducing abortion stigma, increasing abortion importance in candidate selection, increasing knowledge of restrictions). Researchers and advocacy groups have certainly enacted interventions at both levels.

At a macro-level, there are initiatives that focus on training new providers, awareness campaigns and petitions to repeal certain restrictions, and strategies at a legal level. For example, organizations such as the Family Planning Fellowship, Society of Family Planning, and National Abortion Federation provide abortion support, training, and scientific examination of abortion to improve conditions of provision (as very few medical schools require abortion training in their preclinical curriculum; Espey, Ogburn, Chavez, Qualls, & Leyba, 2005; Norris et al., 2011). Creating new generations of abortion providers combats the growing fear that abortion providers

are aging and there will be no one to replace them—providers decreased by 38% between 1982 and 2005 (Jones & Kooistra, 2011). Centers such as the University of California San Francisco (UCSF) Bixby Center have trained over 5,200 providers with their Fellowships and training programs (Bixby Center for Global Reproductive Health, 2018). With these training programs, the demographic of abortion providers is changing (ten years ago, the majority of abortion providers in the U.S. were White men over the age of 55 who had been practicing for over a decade; O’Connell et al., 2008). More recently, research examined demographics of private practice obstetrician-gynecologists (ob-gyns) who provide abortions and found that young female physicians were more likely to provide them if encountering a patient who sought one (Stulberg, Dude, Dhalquist, Farr, & Curlin, 2012). However, the majority of abortion providers are not private practice physicians and research shows that 97% of the ob-gyns in Stulberg and colleagues’ sample (2012) reported having been solicited for abortion services by patients but only 14% provided them. Another study examining abortion provision and referrals among ob-gyns in the United States revealed that of the physicians who reported they would not provide abortions, 35% also said they would not provide a referral for a physical who would (Desai, Jones, & Castle, 2018). Therefore, these training programs for physicians are continually needed.

Another example of macro-level interventions is the All* above All (2013) petition and social media campaign to raise awareness about the harmfulness of the Hyde Amendment (Boonstra, 2016). A third example is the “Voices Brief,” a document consisting of women’s abortion narratives submitted to the Supreme Court by the National Abortion Rights Action League (NARAL Pro-Choice America) to convey the reality of abortion in women’s lives. Although the Supreme Court has never publicly cited this brief, Levit and Verchick (2016) point to evidence that this brief may have prompted empathetic insight in some of the justices. These

macro-level initiatives (e.g., changing policy and practices) have the ability to impact individual attitudes as well (Lipp, 2011).

Scholars have discussed strategies at an interpersonal or intrapersonal (micro-) level to increase normalization and decrease stigmatization. Examples of these strategies include changing the way “pro-choice” people distance themselves from “good” and “bad” abortions, making an effort to use plain and simple language in social interactions (e.g., “products of conception”), and forming groups to empathize with others who have had abortions (Link & Phelan, 2001; Lipp, 2011; Norris et al., 2011). Empathy has been well studied as a mechanism to change affect-based attitudes; however, few studies have examined empathy building with a general population to increase knowledge of and decrease support for abortion restrictions.

Changing affect-based attitudes with empathy. In general, empathy is a result of perspective-taking that “occur[s] when people can seemingly understand the underlying reasons for the behavior of someone other than themselves” (Plumm & Terrance, 2009, p. 191). Scholars have examined two primary types of empathy: trait and state (Batson, Turk, Shaw, & Klein, 1995; Haegerich & Bottoms, 2000; Plumm & Terrance, 2009). One cannot manipulate trait empathy easily, as it results from an individual’s similarity with the population in question (e.g., personal characteristics such as gender and race). State empathy is a result of an individual’s ability to put themselves in the shoes of another person (i.e., perspective-take) based on presented situational factors; it can be induced and, therefore, experimentally manipulated (Plumm & Terrance, 2009). Trait and state empathy are linked in that if a person has trait empathy (similarities with the target population), one will be more likely to induce state empathy (i.e., put themselves in the shoes of another; Plumm & Terrance, 2009). Research suggests that certain personal experiences (e.g., having faced discrimination, having daughters, knowing

someone who has experienced rape) lead to higher levels of state empathy (Glynn & Sen, 2015; Moyer & Haire, 2015; Wiener, Felman Wiener, & Grisso, 1989). Moreover, women are generally more likely than men to have higher levels of empathy (Eisenberg & Lennon, 1983; Hoffman, 1977), but there has been effective experimental induction of state empathy for men regardless of trait empathy (Plumm & Terrance, 2009).

In addition to studying what characteristics are more conducive to empathy building, literature has elucidated different types of responses to empathy (e.g., cognitive, attitudinal, or behavioral; Davis, 1996). Behavioral response to empathy has been studied in the legal system, such as examining empathy's effect on judges' decisions on who to side with in gender-related cases (Glynn & Sen, 2015; Moyer & Haire, 2015) and mock jurors' rating of homicide defendant responsibility (Plumm & Terrance, 2009). These studies have shown that empathy shifted cognition and therefore resulted in the reevaluation of the stigmatized party (e.g., the woman). For example, with an increase in empathy, mock jurors were more likely to understand why a battered woman would kill her abusive husband and consequently, be more likely to shift blame off the defendant and onto the system that failed her (Plumm & Terrance, 2009).

The role of perspective-taking. More empathy research has focused on the role of perspective-taking on attitudes toward and engagement with stigmatized populations. Research shows that perspective-taking is an effective strategy to decrease stereotyping, reduce prejudicial evaluation, and allow people to see themselves in others (Batson et al., 1997; Galinsky & Moskowitz, 2000). Batson and colleagues (1997) proposed three steps that explain how empathy can improve feelings toward a stigmatized group as a whole: first, adopting a person's perspective leads to empathetic feelings; second, those feelings lead to the perception of increased valuing of their welfare; and third, increased valuing should generalize to the group as

a whole. Wang and colleagues (2014) found that perspective-taking increased the degree of engagement with stigmatized groups (e.g., sitting in close proximity or willingness to meet homeless individuals and Ah Beng individuals (stigmatized population in Singapore)). Another study found that prosocial conformity affected empathy induction (Nook, Ong, Morelli, Mitchell, & Zaki, 2016). That is, participants that observed others having high empathy toward a homeless population were more likely to increase their own feelings of empathy and behavioral response (i.e., donate to a homeless shelter).

Empathy and abortion. Many of the studies on perspective-taking and stigmatized populations have been conducted with homeless individuals (Batson et al., 1997; Nook et al., 2016; Wang et al., 2014), individuals who have committed homicide (Batson et al., 1997; Plumm & Terrance, 2009), individuals with illness or disability (Batson et al., 1997; Lor et al., 2015). Whereas the few empathy interventions that have focused on abortion, have targeted either health professionals or populations (e.g., Pace et al., 2008; Turner and colleagues, 2008) or specifically aimed for conflict resolution among “pro-life” vs. “pro-choice” populations (LeBaron & Carstaphen, 1997), but not the individuals who experience abortion. These interventions, however, have been successful in changing attitudes and knowledge toward abortion.

For instance, “values clarification” workshops conducted in Vietnam, Nepal, and South Africa with health care providers, community members, and policymakers aimed to get participants to examine their moral reasoning and values around abortion and achieve empathy for women who had second-trimester abortions (Turner and colleagues, 2008). These workshops found a positive impact on participants’ attitudes but, perhaps, generated less defined change (e.g., increase of empathy and knowledge) than interventions that involve interacting with and

hearing the narratives of women and people in abortion care. For example, members of Medical Students for Choice have the opportunity to participate in an annual Reproductive Health Externship (RHE) program where they spend time working in facilities that provide abortion, sitting in on counseling and procedures, and talking with providers and patients. Pace and colleagues (2008) indicated that following their RHE, students' support for abortion increased, as did their knowledge and empathy for patients and intention to become providers.

Sharing stories and hearing others' perspectives has been effective with more general populations as well, such as in self-identified "pro-life" and "pro-choice" community members who participated in workshops run by conflict resolution practitioners (LeBaron & Carstaphen, 1997). These workshops, designed to break down stereotypes of the other side and find common ground, resulted in fostering empathy and relationship building. In addition to knowledge and attitudes about abortion in general, the effect of empathy can extend to feelings about restrictions. A qualitative study by Cockrill and Weitz (2010) explored women's perceptions of abortion regulations and found that participants who expressed empathy for women seeking an abortion were more likely to argue against restrictions that would make it harder to get one (e.g., require travel long distances). It is important to note that this study was done with a small sample size with women who were recruited at facilities that offer abortion. We are aiming to examine further these links between empathy, knowledge, and support for restrictions with a more general population, specifically, in a hostile state.

Manipulating empathy and knowledge. As there are cognitive and affective components to abortion attitudes, targeting both sides with empathy induction and education could stand to make an impact. Many methods and limitations have been discussed in order to manipulate these attitudinal components via intervention. Batson and colleagues (1997) mention

several limitations to their three steps of improving attitudes toward stigmatized groups with empathy that are important to consider with our chosen population. They mention the possibility that empathy induction could be successful for the individual in the experiment but could fail to generalize to the population because there are subgroups within a population that could experience more or less stigmatization. For example, within the AIDS community, gay men, drug users, women, and children are stigmatized at different levels and one could empathize with a child with AIDS but not with the rest of the group. Batson et al. (1997) also caution for victim responsibility (i.e., participants thinking the population has brought their plight upon themselves). We aim to test if there are differences in empathy between subgroups by manipulating the race of the woman who delivers a testimonial about her personal abortion experiences. Additionally, we aim to test victim responsibility by manipulating perceived pregnancy responsibility. That is, the woman in the intervention video will either report becoming pregnant because of rape or because of consensual sex. We expect there to be differences in empathy and support for abortion restrictions based on these aspects and an increase in knowledge about abortion and restrictions.

With increased knowledge, one can better take a person's perspective and even change attitudes (Currier & Carlson, 2009). Plumm and Terrance (2008) state that in order to take another person's perspective, one must also learn about the "contextual and structural constraints" that contribute to that person's perspective (p. 189). A qualitative study of abortion providers that examined their approach to training medical students illustrates the power of the combination of knowledge and empathy. Participating providers indicated that, even for medical students who were opposed to abortion, by simply learning about the practice of abortion in

addition to observing patients, students developed empathy and an increased appreciation for providers (Freedman et al., 2010).

In order to induce empathy, some studies have included activities such as disability simulations (e.g., engaging in a classroom with loss of dominant hand, vision, or speech; Lor et al., 2015) and assessments testing ability to decipher facial expressions (Drwecki, Moore, Ward, & Prkachin, 2011; Sherman, Lerner, Renshon, Ma-Kellams, & Joel, 2015). Other empathy experiments have had success by having participants watch, listen to, or read a testimonial and then instructing them to think about how the other person might be feeling (Davis, 1996; Haegerich & Bottoms, 2000; Plumm & Terrance, 2009). In order to increase knowledge, experiments that involve video-based interventions have been effective (Conceicao, Pedro, & Martins, 2017; Blas et al., 2010; Parker, Stradling, & Manstead, 1996; Roberto, Meyer, Johnson, & Atkin, 2000; Warner et al., 2008). Specifically, the use of audio or video-based testimonials to increase knowledge and/or empathy appear to result in longer lasting attitude changes than written testimonials or education initiatives alone (Batson et al., 1997; Blas, et al., 2010; Braverman, 20008; Parker et al., 1996; Roberto et al., 2000). Therefore, we plan to test the effect of a video intervention aimed to increase knowledge of abortion restrictions, paired with an (state) empathy-inducing video testimonial to decrease support for said restrictions and increase empathy for women who have abortions.

7. The Current Study

In order to increase knowledge of and decrease support for restrictions, we administered a video intervention containing persuasive messages. However, the effectiveness of these messages depend on type (Ryffel & Wirth, 2016). That is, persuasion efforts aimed at shifting affect-based attitudes (e.g., emotions and feelings) and cognition-based attitudes (e.g., beliefs

and judgments) are most effective when there is a match between the message with the type of attitude (i.e., emotional messages with affective attitudes and informational messages with cognitive attitudes; Ryffel & Wirth, 2016). Attitudes toward abortion are unique in that they are often both emotional (e.g., considering how the woman must feel) and cognitive (e.g., scientific statements against existence of fetal pain, plausibility of being able to financially provide for a child), which can lead to complex feelings about abortion and feelings of ambivalence (Alvarez & Brehm, 1995; Craig et al., 2002; Hunt, Marcantonio, Jozkowski, & Crawford, in preparation; Jozkowski, Crawford, & Hunt, 2018). Ambivalent attitudes are relatively unstable and may be easier to change (Ryffel & Wirz, 2014).

Therefore, in order to persuade a person to decrease support for abortion restrictions, one must address both the affective and cognitive sides of these attitudes. To address the cognitive side, we aimed to raise awareness regarding the extent of restrictions enacted in Arkansas as a baseline intervention. In addition, as a manipulated variable, to address the affective side, we aimed to increase empathy for women who seek abortions by offering a testimonial from someone who has had to face these restrictions.

The current study consisted of several video interventions that addressed either the cognitive side of abortion attitudes (i.e., knowledge of abortion and legislation) or the combination of cognition and affect (i.e., empathy for women who seek abortions). The control video consisted of the knowledge portion only (i.e., a news anchor giving information about abortion and restrictions in Arkansas) and the intervention videos consisted of four different testimonials from actors portraying women who sought out abortion in Arkansas. We manipulated several variables (i.e., race of the woman, perceived pregnancy responsibility) in the testimonial videos to examine the effects of internalized biases on empathy generated.

We compared control vs. intervention video conditions by examining pre-test, post-test, and follow-up differences of knowledge of current restrictions in Arkansas, support for those restrictions, and empathy for women who seek abortions in Arkansas. We explored the following research questions (described in further detail in Chapter 3):

RQ1. Does watching a video with an empathy-inducing personal story in addition to an informational component (intervention) induce significantly different outcomes than watching a video that only contains an informational component (control) on pre-test, post-test, and follow-up scores for 1) knowledge of abortion restrictions and 2) support for abortion restrictions?

RQ2. Do the variables manipulated in the intervention empathy-inducing testimonials (race and pregnancy responsibility) produce different empathy characteristic scores between the five different video conditions (White woman, raped; White woman, consensual sex; Black woman, raped; Black woman, consensual sex; control (no testimonial))?

8. Theoretical Framework

Intersectionality

Conceptually, the theory of Intersectionality offers an explanation as to why abortion is highest among young low-income women of color (particularly residing in rural areas) and simultaneously, they are the most vulnerable to restrictions (Boonstra, 2016; di Mauro & Joffe, 2007; Jones & Kavanaugh, 2011). Intersectionality is a Black feminist theoretical framework credited to Kimberle Crenshaw (1989) but additionally developed by other scholars in the late 1980s/early 1990s such as Debarah King, Patricia Hill Collins, Cherrie Moraga, Gloria Anzualdua, and Nira Yuval-Davis (Gamson & Moon, 2004; McCall, 2005; Nash, 2008; Price, 2011). This framework addresses how multiple social identities relate to power (e.g., privilege)

and oppression at a micro-level and a macro-level. It further dictates that oppressions at a macro-level compound as more micro-level social identities intersect (Crenshaw, 1989).

Dhamoon (2011) discusses the different terminologies used across intersectionality scholars and emphasizes Collins' (2000) key notion that systems of oppression (e.g., patriarchy, racism, sexism, capitalism) are “interlocking.” She posits that it is rare to find a “pure” victim or oppressor because an individual can be a member of an oppressed group and a group of oppressors at the same time (Collins, 1990; Nash, 2008). Dhamoon (2011) stresses that in order to study an issue with an intersectional lens, one cannot only focus on the micro-level identities, and one must acknowledge the associated systems of oppression.

Price (2011) discusses some methods to approaching research methodology with an intersectional approach. She says, “Researchers have shown that race is an important predictor in abortion behavior, but this only skims the surface of an intersectional analysis. We still have to figure out why race is such a strong predictor and how it may be mitigated by other factors, such as socioeconomic status and cultural norms” (p. S56). We aim to study the effect of race and perceived pregnancy responsibility with low-income women. Kumar (2013) points out that “socially excluded” (e.g., low-income women, women of color) experience already stigmatization and discrimination so scholars should be careful not to lump every inequality in as “abortion stigma.” However, we acknowledge that the women who are already at a social disadvantage when they “enter the abortion landscape” (Kumar, 2013, p. e330) and that their obstacles are exacerbated as they navigate an abortion experience. To apply this framework to our population, we will describe each micro-level identity with respect to abortion and discuss examples of the compounding oppressions and barriers.

- **Gender:** The intervention videos only depicted women in the testimonials, as the vast majority of people who have abortions are women. (It is important to note this is not always the case, however, there is a lack of data collection and discourse around trans* men and women, gender queer, or non-binary individuals who have abortions. Therefore, there is need for specifically focused research in the future to elucidate unique issues that arise with these populations). Abortion-seeking women experience sexist oppressions stemming from the patriarchy (which privileges men over women). First, women experience a sexual double standard which encourages women to limit their sexual partners for fear of social repercussions (whereas men are encouraged to have many sexual partners; e.g., Wiederman, 2005) and discourages the use of birth control because of its inherent negative connotation with sexual activity and promiscuity (Campbell, Shin-Hodoglugil, & Potts, 2006). Even if women were to overcome these norms, they experience a lack of comprehensive sex education and contraceptive access, which leads to an increased likelihood of unintended pregnancy. Prevention of and responsibility for pregnancy falls inevitably on women (Kimport et al., 2011) and when deciding which outcome to choose, women face stigma (shame, guilt) of failing their societal expectations as a woman (e.g., wanting motherhood; Kumar et al., 2009) and of needing a “good” reason for abortion (Norris et al., 2011). Although, Kumar and colleagues (2009) point out that not all women face stigma and discrimination, and that social inequality is the root of abortion discrimination.

- **Age + Gender:** The intervention videos only depicted young women in their 20's as they represent the majority (60%) of abortion patients (Jerman et al., 2016). Young women experience an aspect of sexism that enables society to scrutinize and police their sexuality (United Nations, 2004). For example, adults can feel paternalistic toward young women's sexuality and make reproductive health decisions for them via legislation (e.g., parental consent laws; Blasdell, 2002) or conscientious objection by health professionals (e.g., pharmacists refusing to refill young women's birth control pills; Savulescu, 2006). Additionally, they are particularly vulnerable to a structural lack of resources such as education, (reproductive) health, and experience higher rates of sexual assault and violence (United Nations, 2004), which can increase risk of unintended pregnancy and, therefore, increase abortion rates.
- **Class + Age + Gender:** The intervention videos only depicted low-income young women as they represent the majority (75%) of abortion patients (Jerman et al., 2016). In addition to sexism, low-income women experience classist oppressions stemming from capitalism in the U.S. (which privileges the wealthy). With an increased incidence of unintended pregnancy among low-income women (i.e., more than 5 times that of women with an income at or above 200% of the poverty level; Finer & Zolna, 2016), more low-income women are in a position where they are seeking abortions and have to find ways to pay for an abortion. Low-income women already lack financial resources and if they are on public assistance, the Hyde Amendment restricts insurance coverage for abortion. Due to restrictions or in an attempt to avoid stigma, three-fourths of women end up

paying for their abortion out of pocket (Henshaw & Finer, 2003; Jones, Finer, & Singh, 2010). If they come up with the money for an abortion (often by deferring payment on rent, bills, or groceries; Dreweke, 2017), state restrictions that increase travel distance and procedural regulations (e.g., ultrasound) necessitate two trips to the facility, which further increases the financial burden. As mentioned above, if they are unable to come up with the money, they will often be forced to carry the pregnancy to term, which propagates the cycle of poverty because of worse educational and economic outcomes (Boonstra, 2016; Upadhyay et al., 2015).

- **Race + Class + Age + Gender:** The intervention videos examined the extent to which race (White women in comparison to Black women) plays a role in the testimonial portion. White women have the lowest rates of abortion and experience racial privilege and Black women have the highest rates of abortion and experience racial marginalization (Jones & Kavanaugh, 2011). To add to sexism and classism, low-income young women of color experience prejudice and discrimination as a result of racism (which privileges White individuals). First, low-income women of color have an elevated incidence of unintended pregnancy because of disparities in access to health care and therefore, they are less likely to have health care, have gone to a health provider in the last year, or use contraceptives (Lara et al., 2015; Levit & Verchick, 2016). Second, the Hyde Amendment overwhelmingly affects low-income women of color because, due to socioeconomic inequality stemming from racism, women of color are more likely to be on Medicaid (i.e., 30% of Black women and 24% of Hispanic women aged

15–44 are enrolled in Medicaid, compared with 14% of White women; Boonstra, 2016; Frohwirth, 2014). Because of racial prejudice, people see women of color as less worthy of protection and in need of intervention on behalf of fetuses and children (Harrison, 2016). Women of color uniquely face the concurrent problematizing of their sexuality (e.g., hypersexual; Gamson & Moon, 2004) and criminalizing of their pregnancies (Smith, 2005). Thus, they lack support before they become pregnant, as pregnant women, or in terminating their pregnancies.

Finally, we examined circumstance of pregnancy in addition to race (controlling for class, age, and gender). These oppressions affect all aspects of a woman’s unintended pregnancy, including how others perceive her. This last aspect could or could not be considered an identity. That is, depending on the situation in which a pregnancy occurred (e.g., consensual sex, rape), a woman could take on the identity of “rape victim” but some women who experience rape never label themselves as such (Koss, Gidycz, & Wisniewski, 1987). Other people perceive these “identities” differently based on their moral foundation; how one conceptualizes morality is important to abortion attitudes and can influence whether people think certain women should have access (Haidt & Graham, 2007). Specifically, the pregnancy circumstance can affect how others perceive her responsibility based on internalized sexism, racism, and classism. A woman who is pregnant as a result of consensual sex will likely be judged harsher for seeking an abortion than a woman who was raped on the assumption that people will think the woman who became pregnant as a result of consensual sex had some control over her risk of pregnancy (Hans & Kimberly, 2014). Adding biases toward young low-income women and women of color (e.g., misconceptions such as laziness or lack of education) exacerbates those perceptions, widening

the gap between privileged and oppressed women with social minority statuses (e.g., low-income, not White) and women with social majority statuses (e.g., high-income, White).

CHAPTER 3: METHODOLOGY

The Current Study

Abortion is *safe* (Guttmacher Institute, 2017a; Kulier et al., 2011), but there is discourse perpetuating misconceptions (e.g., abortion leads to negative health outcomes). Abortion is *legal* (Ellison, 2003; Roe v Wade, 410 US 113, 1973), but there are numerous restrictions that limit access. And abortion is *prevalent* (Dreweke, 2017; Guttmacher Institute, 2017f; Jones & Jerman, 2017b), but low-income women of color have the highest rates and are the most vulnerable to restrictions (Jones & Jerman, 2017b). Given this environment, abortion remains a contentious social issue. Knowledge of abortion and abortion restrictions is low (Bessett et al., 2015; Kavanaugh, Bessett, & Littman, 2013; Cockrill & Weitz, 2010; Gondor et al., 1996; Lara et al., 2015; White et al., 2016), but attitudes toward abortion are complex (e.g., Hans & Kimberly, 2014; Jozkowski, Crawford, & Hunt, 2018), and may lead to unfounded or misled support for abortion restrictions (Weitz et al., 2008). Previous interventions have attempted to improve conditions of abortion at a macro-level (e.g., Boonstra, 2016; Levit & Verchick, 2016) and attitudes toward abortion at a micro-level (e.g., Link & Phelan, 2001; Lipp, 2011; Norris et al., 2011) using empathy building strategies. Many studies that use empathy induction strategies have had success with video testimonials (Blas, et al., 2010; Braverman, 20008; Parker et al., 1996; Roberto et al., 2000). Intervention is particularly needed to raise awareness of restrictions and increase empathy for women who seek abortions in extremely hostile southern states, such as Arkansas.

To date, no media-based interventions have attempted to address abortion knowledge and empathy in a hostile Southern state, specifically targeting perceived pregnancy responsibility, and the potential influence of race. As such, the current study aimed to test the effectiveness of

an empathy-based, video intervention via a randomized-controlled experiment with Arkansas residents to increase awareness about abortion legislation in Arkansas and decrease support for restrictions.

The current study consisted of several video interventions designed to increase empathy for women seeking abortion by either only increasing knowledge of abortion and abortion restrictions (control- cognition only) or increasing knowledge combined with increasing empathy for a woman telling a personal story about how restrictions affected her experience getting an abortion (intervention- cognition + affect). There were four different testimonials given for the affective portion of the intervention condition. The testimonial was either delivered by a White woman or Black woman. Both told a story of obtaining an abortion in Arkansas after becoming pregnant as result of rape or consensual sex. Participants assigned to the intervention condition received one of the four testimonial versions. We compared control and intervention video conditions by examining pre-test, post-test, and follow-up differences of knowledge of current restrictions in Arkansas, support for restrictions, and empathy for women who seek abortions in Arkansas. Additionally, we compared outcome scores between all five conditions (control and four interventions) to examine the effects of potential internalized biases on empathy generated (based on manipulated variables: race and perceived pregnancy responsibility).

Research Design

The intervention was a randomized-controlled design and participants were randomly assigned to one of five videos. A pre-test and two post-tests were administered to all participants (see Figure 3.1 for flow diagram). All participants (i.e., control and intervention conditions) took the same pre-test and watched a video clip about current restrictions in Arkansas (cognitive/knowledge portion) aimed at increasing participants' knowledge about Arkansas

abortion restrictions. The control condition then immediately received a post-test. The intervention conditions watched one of four testimonial video clips (affective/testimonial portion) after the knowledge clip of a woman speaking about her experience of how restrictions made obtaining an abortion in Arkansas more difficult:

- Intervention 1: Knowledge + Testimonial (White woman, Raped)
- Intervention 2: Knowledge + Testimonial (White woman, Consensual Sex)
- Intervention 3: Knowledge + Testimonial (Black woman, Raped)
- Intervention 4: Knowledge + Testimonial (Black woman, Consensual Sex)

After the testimonial clip, the intervention condition received the post-test. Two weeks later, both conditions received a second post-test to test for rebound effect (Johansson-Love & Geer, 2003). All conditions received one \$10 e-gift card after post-test 1 and another one after the follow-up post-test as incentives to participate and improve attrition rate. All procedures were approved by the Institutional Review Board at the institution of data collection.

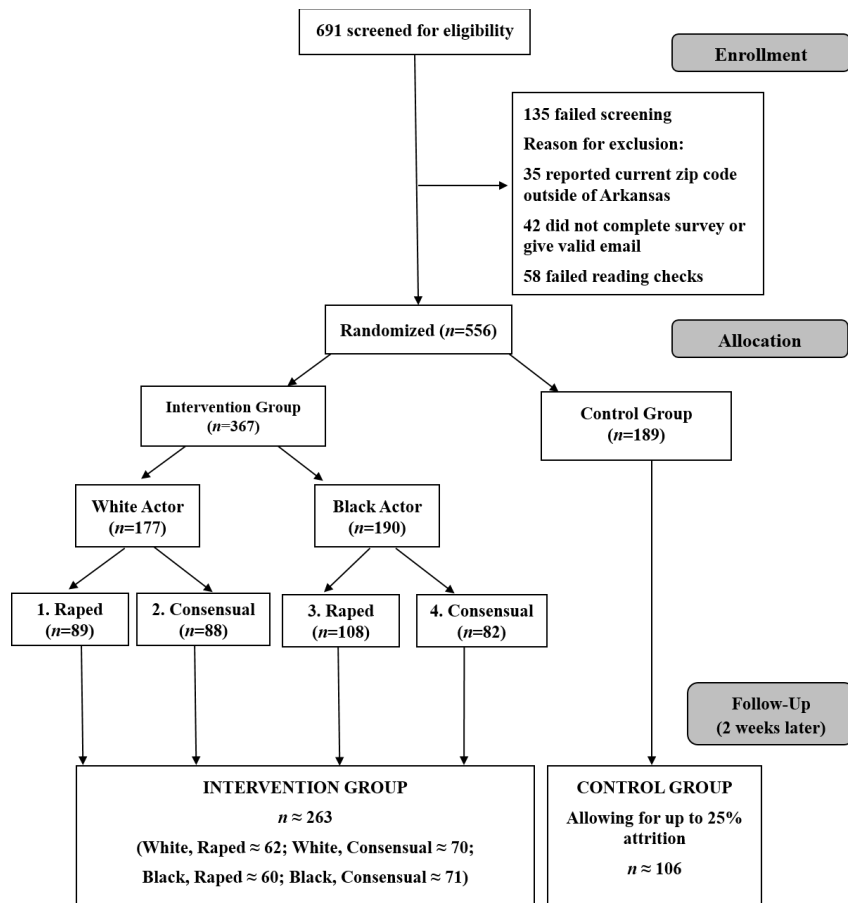


Figure 3.1. Flow diagram for randomization and allocation to groups.

Videos. The content of the videos (e.g., casting, script, visual aids) were guided by persuasion in media literature (e.g., establishing credibility, using second-person pronouns to create personal relevance; Burnkrant & Unnava, 1989; Petty & Priester, 1994) and Intersectionality (Crenshaw, 1989). Evidence-based reasoning in video content development is detailed in Appendix A.

Cognitive (knowledge) portion. In this portion, a news anchor briefly informed participants about the safety and legality of abortion. Then they outlined the rules (i.e., legislative

restrictions) patients and doctors must follow in order for abortion in Arkansas (see Appendix A for a table of script language and corresponding survey questions).

Affective (testimonial) portion. Using an intersectional approach to analyses and discussion, we manipulated variables based on social identities of the person in the video. We controlled for social identities such as gender, socioeconomic status, and age—all people in the video presented as women, indicated that they are low-income, and appeared to be in their 20's to parallel salient characteristics of the majority of abortion patients (75% and 60% respectively; Jerman et al., 2016). Alternatively, we manipulated three variables: video content (control vs. empathy testimonial), race of the woman in the video (White woman vs. Black woman), and degree of perceived pregnancy responsibility in the testimonial (raped vs. consensual sex). In the video, the woman described her experience becoming pregnant and the obstacles that made obtaining an abortion in Arkansas more difficult (see Appendix A for script language and corresponding Chapter 2 abortion topic). We counterbalanced the two intervention scripts in terms of length and content (Ryffel & Wirth, 2016).

Procedures

Before the survey administration, we pilot tested the instrument with a convenience sample ($n=10$) of researchers to assess for clarity/readability. After the instrument was finalized, we administered an online video-based randomized-controlled trial with Arkansas residents (18+) ($N=369$) through Qualtrics survey software. A convenience sample of participants were recruited through specialized social media (e.g., Arkansas specific Reddit and craigslist pages, Facebook), word of mouth, email, and listservs. Group sample sizes ($n=90$) were generated from a power analysis using G*Power (Faul et al., 2007) with power ($1 - \beta$) set at 0.80 and $\alpha = .05$, two-tailed.

First, participants who received the survey link were directed to an introductory page providing them with information about the study. After clicking to the next page, they were directed to an informed consent form which notified them that by completing the survey, they were indicating their consent to participate. Interested participants clicked to the next page, which began the online survey (see Appendix B for all online survey materials). The participants started with a pre-test that included: 1) demographic information (including three initial screening questions on age, residency, and native language that automatically ended the survey for those that are younger than 18, not currently living in Arkansas, or non-native English speakers that did not attend primary education in an English speaking school), 2) political behaviors (voting and media consumption), 3) general knowledge about abortion, 4) knowledge of Arkansas abortion restrictions, 5) attitudes toward people who seek abortions (i.e., revised from Batson et al., 1997), 6) Social Dominance Orientation (Ho et al., 2015), 7) identification of Empathic Concern and Perspective-Taking (Davis, 1983), and 8) the Marlowe-Crowne Social Desirability Scale-Short Form (Ballard, 1992; Reynolds, 1982). After completing the pre-test, participants were randomly assigned to an intervention or control group (see Figure 3.1 flow chart).

After viewing the assigned video (control or one of four intervention videos), a post-test with similar questions to the pre-test was administered to assess effects. In addition, the post-test included assessments of empathy for women who seek abortions in Arkansas (i.e., 6 characteristics from Batson et al. (1997) and a pictorial scale based on the IOS scale (Aron, Aron & Smollan, 1992). Based on previous literature (Aron, Aron, & Smollan, 1992; Johansson-Love & Geer, 2003), a follow up post-test was administered two weeks after the intervention to measure re-bound effects. A two-week time period between post-test 1 and the follow-up post-

test was chosen to model a methodologically similar study by Johansson-Love and Geer (2003). They conducted a study using a pre-test, post-test, follow-up (PPF) design to administer a video-based intervention. This intervention used a testimonial (control vs. experiment) to shift attitudes toward a contentious social topic (e.g., rape myths) and found consistency in responses between the first post-test and follow-up post-test, arguing reliability of the data over the two-week period.

The follow-up post-test included similar questions to the post-test 1 in addition to 1) an assessment of source credibility (the actors in the video) (Ohanian, 1990) and 2) an inquiry about any media consumption related to abortion or abortion restrictions in the 2-week period between post-test 1 and follow-up post-test. See Figure 3.2 for a diagram of study protocol.

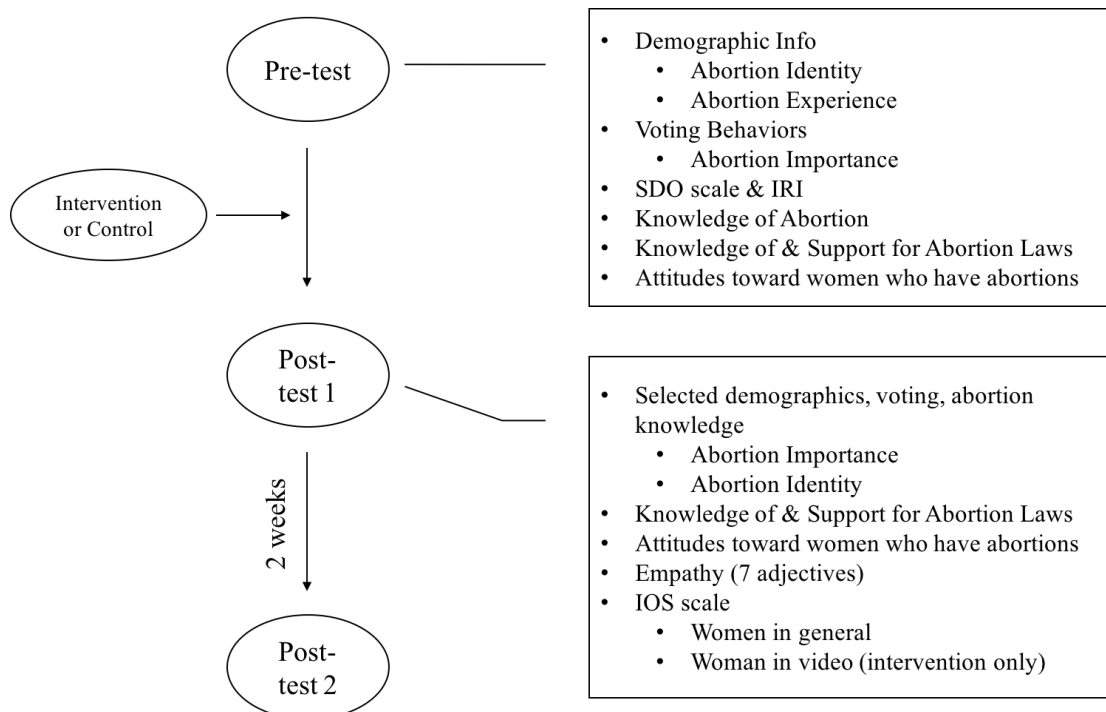


Figure 3.2. Diagram for study protocol and summary of administered measures.

Measures

The pre-test survey (see Appendix C) will include the following measures:

Demographic questions. The demographic section included questions on age, state residency, native-language, zip code (current and of hometown), length of Arkansas residency, gender, race/ethnicity, household income (i.e., in relation to the Arkansas poverty line ~ \$16,000; United States Census Bureau, 2016), relationship status, education, employment, sexual orientation, religious attendance and importance, religious denomination, political ideology (i.e., social issues and economic issues) and party, and abortion experience (e.g., self, others). We also asked about abortion identity via two questions: identification with “pro-life”/“pro-choice” labels and to what extent they think it should be possible for a pregnant woman to obtain a legal abortion on a 6-point Likert scale (Hunt, Marcantonio, Jozkowski, & Crawford, forthcoming).

Voting behaviors. The voting behaviors section included Gallup Poll questions regarding registered voter status, perception of the extent to which they follow politics, frequency of voting behaviors, likelihood of voting and importance of abortion for candidates in the next state election. We chose to slightly augment Gallup’s language (from presidential elections to state elections) because our intervention concerns restrictions that apply specifically to Arkansas.

Media consumption behaviors. We asked two questions that assess the consumption of different types of political media participants. Participants were asked to specify from where they get their information on current events (e.g., television, print, websites, podcasts). After, they were asked how they would describe those sources from Strongly Liberal to Strongly Conservative.

SDO7 scale. The Social Dominance Orientation₇ scale (Ho et al., 2015) is a measure of “support for inequality between social groups and has been shown to play a central role in a range of intergroup attitudes, behaviors, and policy preferences” (Ho et al., 2015, p. 1004). It includes 16 items about group-based inequality on a 7-point Likert scale ranging from 1 (strongly oppose) to 7 (strongly favor). Example items include “Some groups of people must be kept in their place” and “It’s probably a good thing that certain groups are at the top and other groups are at the bottom.” Higher scores indicate higher endorsement of inequality between groups.

Interpersonal Reactivity Index (IRI). The IRI (Davis, 1980) is a 28-item “self-report measure consisting of four 7-item subscales, each tapping some aspect of the global concept of empathy” (Davis, 1983, p. 113) The current study only used two subscales that relate to our aims: Empathic Concern which “assesses ‘other-oriented’ feelings of sympathy and concern for unfortunate others” (p. 114) and Perspective-Taking which “assesses the tendency to spontaneously adopt the psychological view of others” (p. 113). Each subscale is 7 items and is rated on a 5-point Likert scale ranging from 1 (does not describe me well) to 5 (describes me very well). An example of an item on the Empathic Concern subscale is “I often have tender, concerned feelings for people less fortunate than me” and an example item on the Perspective-Taking scale is “I believe that there are two sides to every question and try to look at them both.”

Abortion restrictions in Arkansas. The abortion restrictions section included questions assessing perceptions of legality and difficulty of access to abortion and support for permissiveness of restrictions (e.g., more strict, less strict) in the U.S. and Arkansas. Additionally, we offered a list of possible abortion restrictions in the 10 major restriction categories (Nash et al., 2017) and asked participants to indicate 1) which restrictions apply to

Arkansas (to measure knowledge) and 2) to what extent do they agree or disagree (on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree)) with each restriction.

Knowledge of abortion. To measure general knowledge of abortion, we used Bessett and colleagues' (2015) knowledge questions on risks and prevalence of abortion but updated some of the information (i.e., 24% of women will have an abortion by the age of 45 instead of the original answer of 33%, which was true at the time of publishing). We also included a question to assess participants' knowledge of types of abortion and wrote questions guided by information from Guttmacher Institute (2017a) and Jones and Jerman (2017b) that assess participants' knowledge of common abortion patient characteristics.

Attitudes toward women who seek abortions. To assess attitudes toward women who seek abortions, we modeled our questions after Batson and colleagues' (1997). Originally, they wrote 7 items each to assess empathy for three populations: individuals with AIDS, individuals who are homeless, and "convicted murderers" modeled off McConahay's (1986) 7-item "Modern Racism Scale." Our scale includes 12 items on a 9-point Likert scale and examples of items include: "Women who seek an abortion have no one to blame but themselves for getting pregnant" (1 = strongly disagree, 9 = strongly agree) and "How much do you personally care about the well-being of women who seek an abortion?" (1 = not at all, 9 = very much).

Marlowe-Crowne desirability scale-short form. This scale (Ballard, 1992; Reynolds, 1982) assesses the degree to which participants' self-report data may be susceptible to social desirability bias. The short form is 11 items rated "true" or "false" as it pertains to the participant. Low scores indicate that participants may be more willing to answer truthfully even

when answers might meet social disapproval, whereas high scores may mean participants are highly concerned with social approval.

The post-tests (see Appendix C) include selected questions from the pre-test and the following measures:

Empathy for women seek abortions in Arkansas. To measure empathy induced for women who have abortions in Arkansas, participants indicated to what extent they experienced six specific feelings (Batson, 1991; Drwecki et al., 2011) after viewing their assigned video. Feelings include “tender,” “softhearted,” “warm,” “compassionate,” “moved,” and “sympathetic” on a 7-point Likert scale from 1 (not at all) to 7 (very much). Additionally, participants were asked in an open-ended follow-up: what aspect of the video caused you to feel the way you did while watching it?

Inclusion of Other in the Self (IOS) scale. The IOS scale (Aron, Aron, & Smollan, 1992) is a “single-item, pictorial measure of closeness” (p. 598) to assess to what extent participants experienced self-other overlap (an important component of perspective-taking; Decety & Jackson, 2004). Participants in both control and intervention conditions indicated “which picture best describes how you feel about yourself (self) in relation to a woman who has had an abortion (other)?” Participants in the intervention condition who receive the testimonial video portion completed the scale again in relation to “the woman you watched in the video who told her story about seeking an abortion.” Additionally, both conditions were asked to describe why they picked the picture they did in an open-ended response.

Source-Credibility scale (Ohanian, 1990). In the follow-up post-test, participants were asked to evaluate the actor(s) in the video they watched 2-weeks prior using the Source-

Credibility scale, 15 items on a 9-point bipolar scale assessing the attractiveness, trustworthiness, and expertise of the source. An example of an attractiveness item is assessing the source from “Attractive” to “Unattractive” on a 9-point scale. An example of a trustworthiness item is rating the source from “Dependable” to “Undependable” and an example of an expertise item is rating the source from “Qualified” to “Unqualified.” Lower scores indicate more credibility of the source.

Confounding factors. In the 2 weeks between post-test 1 and the follow-up post-test, we asked participants if they sought out any media relevant to abortion or abortion restrictions. Additionally, participants were asked if they knew anyone who sought an abortion in the last two weeks and if they knew anyone (actors) in the videos they watched to account for biases related to familiarity.

Reading checks. There were two reading checks in the pre-test -- one in the IRI in the pre-test and one in the Knowledge of Abortion Restrictions scale in post-test 1 and the follow-up post-test. These checks instructed participants to select a certain answer (e.g., “please select 3”) to assess attention to reading.

Videos

Production. The investigators sent out a casting call seeking three actors (i.e., one news anchor and two testimonial women- one White and one Black) to the Theater department listserv at the institution of data collection. Interested parties responded with their headshot and resume and were chosen based on appearance (e.g., met specific characteristics of the role) and acting experience. The selected actors were given instruction on visual aesthetic choices (e.g., clothing, hairstyle) and tone of the script delivery. The news anchor character looked professional and

wore a navy blazer and natural make-up with her hair down. The two testimonial women were instructed to wear their hair down with natural make-up as well. Additionally, they were told to wear clothing with no visual brands or logos. The script and tone instruction for the informational portion was intended to be neutral (e.g., facts only) whereas the testimonial portion was intended to be more emotional, inducing empathy for the woman telling the story.

We hired a freelance video production specialist from the institution of data collection to shoot, edit, and produce the video content. The news portion was shot in a meeting room with a “news” desk at the institutional of data collection. The testimonials were shot outside in to simulate an on-site interview. All four associates were compensated for their time and expertise.

Content. Several media persuasion strategies guided the development of the content of five versions of the intervention videos (e.g., casting, script development, visual aids). For example, to establish credibility of the news anchor as a source of information (Petty & Priester, 1994), she opened the segment stating that she was a graduate student in public policy at the institution of data collection who is an expert in reproductive health policy. By tying her to the well-known institution of data collection, as well as delivering the story about the state in which participants currently live, the audience is more likely to pay attention to the information (Devereux, 2007; Golding & Elliott, 1979; Wahl-Jorgensen & Hanitzsch, 2009). Furthermore, she used second-person to create personal relevance when explaining restrictions in Arkansas, (e.g., “*if you’re under 18, you have to get permission from a parent...*”; Burnkrant & Unnava, 1989). To enhance comprehension (e.g., Lee, Lee, Liao, & Wang, 2015) and break up the monotony of information delivery in the news story, the first author created visual aid graphics, which were projected with each restriction. The graphics were reviewed by 12 research assistants and two colleagues and rated on design and perception of political lean (e.g., on a scale of 1-5

with 1 as “pro-choice,” 3 as neutral, and 5 as “pro-life”). Graphics that were rated as having poor design (e.g., color, font) or leaning too far “pro-choice” or “pro-life” were augmented. The script was reviewed by a team of five experts (in media effects, women’s reproductive health, sociology, and public health) for clarity and wording.

Informational portion. The informational portion consisted of a news story aimed to increase awareness of the myriad abortion restrictions in Arkansas. The news anchor introduces herself and briefly informs participants about the safety, legality, and types of abortion (e.g., “*Abortion, which is when a pregnancy is ended so that it does not result in the birth of a child, has been legal in all 50 US states for over 40 years*”). She describes the magnitude with which restrictions have burdened states, particularly Arkansas, in recent years (e.g., “*Arkansas is in top three states with the newest laws restricting abortion access*”). Then she describes the nine legislative restrictions in the ten major categories of restrictions (Nash et al., 2017) that apply to Arkansas (e.g., “*If you’re under 18, you have to get permission from a parent. Research shows it delays the procedure or teens may travel to states without these laws to get an abortion*”), each with an accompanying visual graphic. Finally, the news anchor ends the clip describing how these restrictions have affected accessibility in Arkansas (i.e., “*Now there are only 4 clinics in 2 cities in the state that can offer abortion services to the 1 million women that live in Arkansas*”).

Testimonial portion. All four versions of the testimonial portion began with an introduction by the news anchor (e.g., “*The largest group of women who get abortions in the US are in their 20’s and low-income like Mia, who is here to tell us a personal story about her experience with these Arkansas laws*”). The four versions varied by race of the woman giving the testimonial (i.e., Black or White) and incidence of pregnancy (e.g., pregnancy as a result of rape or consensual sex). All versions of the intervention were similar in terms of length and wording

(Ryffel & Wirth, 2016). The testimonial begins as the woman, “Mia,” describes her experience becoming unexpectedly pregnant and seeking an abortion. In the both pregnancy circumstance versions, she states that she did not know the person with whom she became pregnant and “didn’t tell anyone about it for a long time.” In the rape version, she begins with “*last year, I was raped. I was coming out of work being attached in the parking lot*” and in the consensual sex version, she begins with “*last year, I became pregnant.*” She outlines the time it took for her to realize she was pregnant (i.e., “*You count from the first day of your last period so by the time you find out you’ve missed a period, you’re already 4-5 weeks pregnant. I rarely get my period on time so I didn’t even know I was pregnant until I took a test around 8 weeks*”). She details the obstacles that made obtaining an abortion in Arkansas more difficult because of restrictions in place (e.g., lack of insurance coverage, necessitated travel and waiting period increasing costs). She described her economic troubles such as “living paycheck to paycheck” and struggling to afford rent and groceries and having to use all of the money in her bank account to pay for the abortion—so much that she had to ask a friend for money for the bus ride to the clinic 3 hours away and having to sleep in the bus station for two nights since “they make you wait 48 hours.” She concludes with the video by stating that these restrictions made it harder for her (i.e., “*I was sure of my decision and just wanted to get this taken care of as soon as possible, in the safest way possible. But these laws made everything go so much slower and so much more expensive because I had to take time from work and stay extra days*”) and saying that she doesn’t regret it and felt relieved afterward. In the consensual version, she says “it wasn’t the right time” and in the rape version, she says “I just wanted to put the rape behind me.”

Research Questions and Hypotheses

We explored the following research questions:

RQ1. Research question 1 aimed to test the effectiveness of the *intervention* videos compared to the *control* video. That is, does watching a video with an empathy-inducing personal story in addition to an informational component (cognitive/knowledge + affective/empathy) induce significantly different outcomes than watching a video that only contains an informational component (only cognitive/knowledge). To explore the effectiveness of the affective/empathy component, we compared outcomes of those who received the control condition to those who received the intervention conditions on three sub questions:

RQ1.1. Does knowledge of abortion restrictions differ between experiment and control video conditions across the time points? We hypothesized that H1.1) disregarding video condition, all participants will experience an increase in Arkansas abortion restriction knowledge; all participants received the same informational component.

RQ1.2. Does support for abortion restrictions differ between experiment and control video conditions across the time points? We hypothesized that H1.2) there would be a larger decrease in support for abortion restrictions for those in an intervention condition compared to the control video. Those who hear a personal story may be influenced by learning about the negative effect on those who seek abortions in Arkansas (Currier & Carlson, 2009; Plumm & Terrance, 2009).

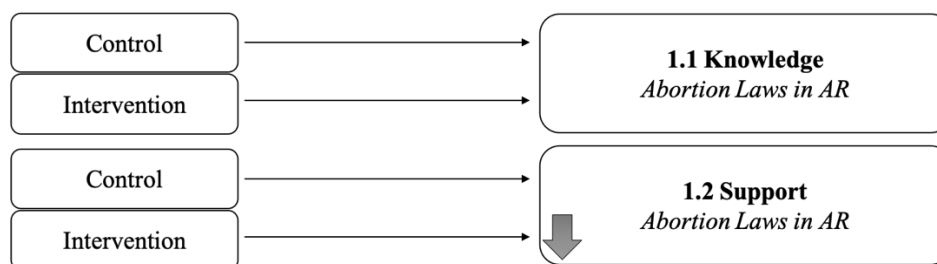


Figure 3.3. Illustration of hypotheses 1.1-1.2.

RQ2. Research question 2 aimed to test if the variables manipulated in the intervention empathy-inducing testimonials (race and pregnancy responsibility) produced different empathy outcomes. Comparisons of empathy characteristic scores were made between the five different video conditions (White woman, raped; White woman, consensual sex; Black woman, raped; Black woman, consensual sex; control (no testimonial)). To explore the impact of these variables, we compared empathy outcomes in all five condition groups on three sub questions:

RQ2.1. Do scores on the six empathy characteristics differ depending on the race of the woman in the video? We hypothesized that people who viewed the Black woman’s testimonials would have lower scores on the six empathy characteristics than those who viewed the White woman given internal racial biases against women of color.

RQ2.2. Do scores on the six empathy characteristics differ based on perceived pregnancy responsibility? We hypothesized that participants who viewed the testimonial where the woman became pregnant as a result of rape would have higher scores on the six empathy characteristics than participants who heard the woman became pregnant as a result of consensual sex.

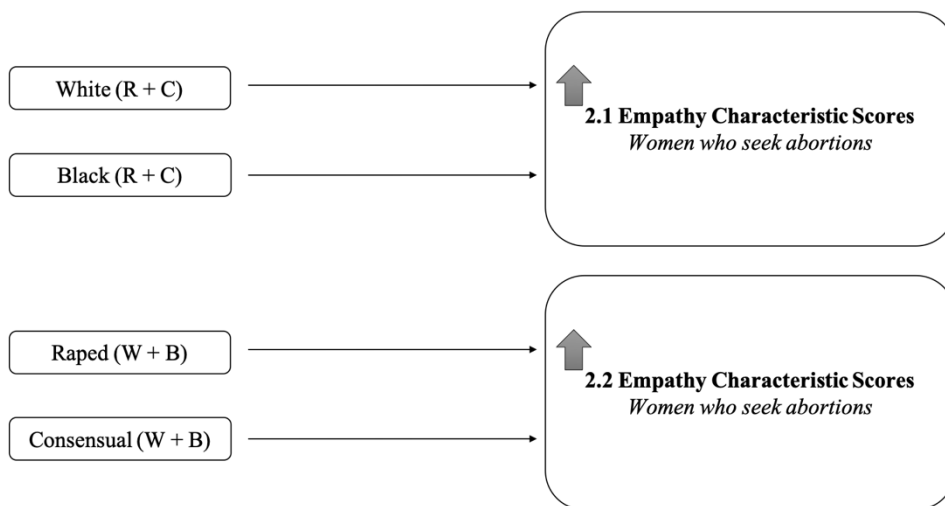


Figure 3.4. Illustration of hypotheses 2.1-2.2.

RQ2.3. Does watching a certain testimonial produce different empathy sum scores compared with the other videos? What other personal experiences/traits contributed to empathy sum scores? The variables we evaluated were participants' sex, previous experience with abortion, previous experience with sexual assault, baseline Empathic Concern (how naturally empathetic one is), social desirability score (to what degree participants feel pressure to act according to what is socially acceptable) and assigned video condition. Specifically, we hypothesized that 1) females, 2) people with personal experiences with abortion, 3) people with personal experiences with sexual assault, 4) higher baseline Empathic Concern, 5) people with higher social desirability scores, and 6) people who viewed the video with a White woman who was raped would have the highest empathy sum scores. We examined participants' race in another model but it was not significant and was not included in the final model.

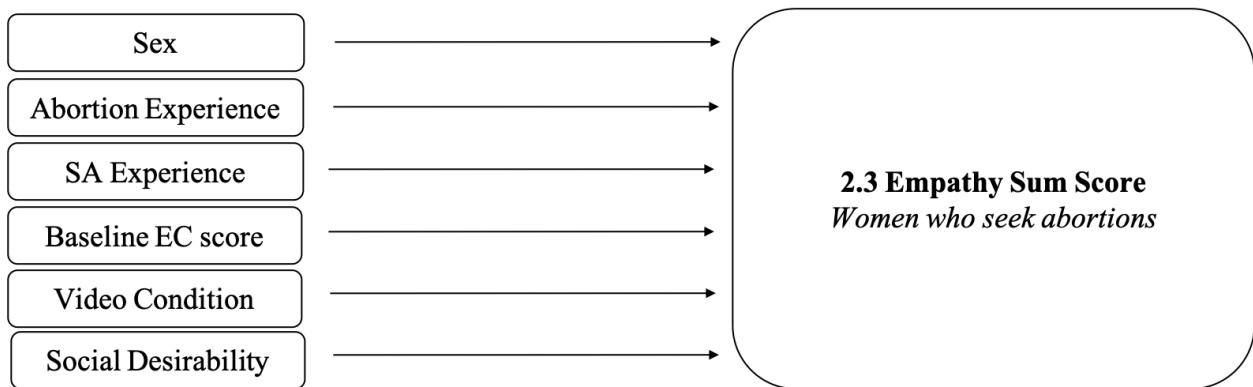


Figure 3.5. Illustration of Hypotheses 2.3.

Data Analyses

Data were downloaded from Qualtrics Survey Software into SPSS. Data were analyzed by several statistical tests (see Table 1 and Table 2) with the following dependent variables: knowledge of abortion restrictions in Arkansas, support for restrictions in Arkansas, and empathy characteristic scores. Specific comparisons were made in two separate manuscripts.

Manuscript 1 (RQ1) examined the effectiveness of an intervention that included knowledge and testimonial components compared to the control, which only included a knowledge component. We examined differences in pre-test, post-test 1, and follow-up post-test scores for knowledge, and support for restrictions (RQ1.1-1.2) by conducting repeated-measures analyses of variance (ANOVA) with a multivariate approach were used to examine differential changes across times on KAR scores (RQ1.1) and SAR scores (RQ1.2) between intervention and control groups. When the interaction was significant, we explored the simple effects by examining differences between time points (i.e., pre-test and post-test, post-test and follow-up, pre-test and follow-up) with a Bonferroni correction. When the interaction effect was not significant and the main effects were significant, we conducted a post-hoc univariate tests to assess simple effects. Variables and analyses are depicted in Table 3.1.

Manuscript 2 (RQ2) specifically examined differences in empathy for women who have abortions by the manipulated variables in the four testimonials (race, perceived pregnancy responsibility). To measure empathy scores, an aggregated score was calculated post-video from Batson et al.'s (1997) scale assessing the extent to which participants experienced six different empathy-related characteristics. To account for baseline tendency for empathy, the Empathic Concern subscale score on the IRI scale (Davis, 1983) was calculated from the pre-test and controlled for during these comparisons.

To examine each of the six empathy characteristics (sympathetic, moved, compassionate, tender, warm, soft-hearted) by the manipulated variables in the testimonials (i.e., race, perceived pregnancy responsibility), we conducted chi-squared analyses (RQ2.1-2.2). We conducted a chi-square for each emotion by race and by perceived pregnancy responsibility. For race, we compared White woman's testimonials vs. Black woman's testimonials. For perceived

pregnancy responsibility, we compared testimonials in which the woman was raped vs. testimonials in which the woman had consensual sex. Additionally, we conducted post-hoc pairwise Fisher's exact tests.

To assess what factors contributed to empathy sum scores toward women who seek abortions, we conducted two hierarchical regressions testing six predictors (i.e., video condition, sex, abortion experience, sexual assault experience, social desirability, and baseline Empathic Concern)—one at post-test and one at follow-up (RQ2.3). Post-hoc pairwise comparisons were conducted to assess significant differences in our factors of interest. Variables and analyses are depicted in Table 3.2.

Appendices

Table 3.1

Manuscript 1 Analyses

RQ	Description	DV (dependent variable) IV (independent variable)	Analytic Plan
1.1	Does knowledge of abortion restrictions differ between experiment and control video conditions across the time points?	DV: Knowledge of Abortion Restrictions (KAR) Score IV: Control or Intervention Video	*Descriptive Statistics *ANOVA on pre-test scores to check for differences by IV *repeated-measures ANOVA to assess significant differences in KAR scores between those who watched the Control vs. Intervention video at pre-test, post-test 1, and post-test 2
1.2	Does support for abortion restrictions differ between experiment and control video conditions across the time points?	DV: Support for Abortion Restrictions (SAR) Score IV: Control or Intervention Video	*Descriptive Statistics *ANOVA on pre-test scores to check for differences by IV *repeated-measures ANOVA to assess significant differences in SAR scores between those who watched the Control vs. Intervention video at pre-test, post-test 1, and post-test 2

Table 3.2

Manuscript 2 Analyses

RQ	Description	DV (dependent variable) IV (independent variable)	Analytic Plan
2.1	Are there differences in the six empathy characteristic scores by the race of the woman in the video?	DV: Six Empathy characteristic scores (<i>tender, softhearted, warm, compassionate, moved, and sympathetic</i>) IV: Testimonial with Black woman vs. White woman	*Descriptive Statistics *Chi-square analysis per empathy characteristic at post-test and follow-up
2.2	Are there differences in the six empathy characteristic scores by perceived pregnancy responsibility?	DV: Six Empathy characteristic scores (<i>tender, softhearted, warm, compassionate, moved, and sympathetic</i>) IV: Rape testimonial vs. Consensual testimonial	*Chi-square analysis per empathy characteristic at post-test and follow-up
2.3	Does watching a certain testimonial affect empathy sum scores compared to the other videos? Do other personal experiences/traits contribute to empathy sum scores?	DV: Empathy Sum Score IV: sex, previous experience with abortion, previous experience with sexual assault, baseline Empathic Concern, social desirability, video condition	*Two hierarchical regressions testing six predictors—one at post-test and one at follow-up

CHAPTER 4: MANUSCRIPT 1

Effectiveness of a video-based media intervention to address knowledge and support of abortion restrictions in Arkansas: A randomized-controlled trial

Abstract

CONTEXT: U.S. abortion restrictions diminish access and perpetuate a culture of hostility toward abortion seekers. Support for restrictions is high—potentially, because knowledge of restrictions is low. We implemented an empathy-based intervention to increase awareness of abortion legislation and decrease support for abortion restrictions among residents in Arkansas, a particularly restrictive state with regard to abortion. The purpose of this study was to evaluate the effectiveness of this intervention.

METHODS: Using a randomized-controlled trial with a pre-, post-, and follow-up design, a convenience sample of Arkansas residents ($N = 369$) were randomly assigned to view a control (describing abortion legislation) or intervention (including a scripted abortion testimonial) video. Data were analyzed across the study with repeated-measures analyses of variance.

RESULTS: For knowledge of restrictions, there was a statistically significant interaction between the effects of time and video condition. Specifically, post-test scores were significantly higher than pre-test and follow-up scores. In terms of support for restrictions, the time main effect was significant, but the group main effect was nonsignificant.

CONCLUSIONS: The intervention was effective in increasing awareness for Arkansas abortion restrictions. Knowledge scores were significantly higher among those who watched a testimonial; this may be because information was repeated or because emotional connections

made the information more memorable. Support for restrictions decreased across the study, however, the intervention did not have the hypothesized effect on this outcome.

Key words: abortion, abortion legislation, video intervention, Arkansas

Abortion is a prevalent, safe, and legal reproductive event in the U.S. (Dreweke, 2017; Guttmacher Institute, 2017a; Guttmacher Institute, 2017f; Jones & Jerman, 2017b). Despite the ubiquity of abortion, there has been a significant increase in legislative restrictions at the state-level (Center for Reproductive Rights, 2018; Nash et al., 2017). These restrictions are harmful in two main ways. First, they may delay abortions by making it more expensive or logistically/legally challenging for women to obtain them (Bitler & Zavodny, 2001; Jerman, Frohwirth, Kavanaugh, & Blades, 2017; Jones & Weitz, 2009; Roberts et al., 2018). This outcome is a significant public health concern; women who are forced to keep a pregnancy after seeking an abortion experience hardships compared to women who were able to obtain an abortion (e.g., Foster, Biggs, Ralph, Gerds, Roberts, & Glymour, 2018; Foster, Steinberg, Roberts, Neuhaus, & Biggs, 2015; Upadhyay, Biggs, & Foster, 2015). Second, abortion restrictions perpetuate and normalize misleading information (e.g., that abortions are unsafe for women), creating a culture of hostility toward women who seek abortions. Given these consequences, the significant influx of state-enacted restrictions on abortion access is cause for concern.

According to public polls, support for restrictions is high (Bowman & Sims, 2017; Perry Udem & Vox Media, 2016). The majority of U.S. residents (59%) think abortion laws should be made somewhat or much stricter (Bowman & Sims, 2017). One reason there is high support for restrictions is because people think that abortion is morally unacceptable (Bowman & Sims, 2017) and thus believe it should be restricted. Another reason for such high support could be related to lack of knowledge. People have a limited understanding of abortion and legislative restrictions, even among those who have had abortions (e.g., Bessett et al., 2015; Cockrill & Weitz, 2010; Kavanaugh, Bessett, Littman, & Norris, 2013; PerryUdem & Vox Media, 2016;

White et al., 2016). They may be unfamiliar with their state's abortion legislation or they may believe that abortion restrictions protect women's safety—the latter of which is not supported by scientific evidence (Grossman et al., 2015; Jones & Weitz, 2009).

Accordingly, there is need for intervention to educate the public about what restrictions are in place and their potential impact on abortion access. Through intervention, people's attitudes can be shifted--especially in areas like the South with many restrictions and misleading messages about abortion. A review of the literature suggests that interventions administered through media platforms and empathy induction techniques have been successful in increasing knowledge and shifting attitudes (e.g., Braverman, 2008; Batson et al., 1997; Blas et al., 2010; Roberto et al., 2000). As such, the current study aimed to test the efficacy of an empathy-based media intervention in increasing knowledge and decreasing support for abortion restrictions in Arkansas, a state categorized as hostile toward reproductive health access (Nash et al., 2017). We hypothesized that watching an empathy-inducing testimonial video in addition to an informational video would decrease support for restrictions compared to only watching the informational video.

Abortion Restrictions in Arkansas

Although every state has at least some legislative regulation of abortion (Guttmacher Institute, 2018b), the Midwest and Southern regions of the U.S. are considered highly hostile to abortion (Jones & Jerman, 2017a). The restrictions in these areas have an additive effect; collectively, abortion legislation has resulted in declines in the number of available clinics and providers and an increase in travel time and costs associated with obtaining an abortion (Guttmacher Institute, 2017l; Jones & Jerman, 2017a).

Arkansas is among the top three states with the most abortion restrictions passed between 2011 and 2015 (Guttmacher Institute, 2016b) and the Arkansas state legislature introduced more anti-abortion bills than any other state during the 2017 legislative session (Center for Reproductive Rights, 2018). At the time of the study, Arkansas had laws that restricted abortion access by mandating parental involvement, pre-abortion counseling, waiting periods, prohibiting coverage from federal funding (e.g., Medicaid), regulating medication abortion and abortion facilities beyond what is medically necessary or appropriate, and restricting abortions to pre-viability. Additionally, in the event *Roe v. Wade* is overturned, Arkansas declared its intent to limit abortion to the maximum extent (Guttmacher Institute, 2017k; Nash et al., 2017). Currently, there are only three facilities in the state of Arkansas able to provide abortion services (Cartwright, Karunaratne, Barr-Walker, Johns, & Upadhyay, 2018) for approximately 600,000 women of reproductive age (i.e., 15-44; March of Dimes, 2019).

Despite numerous legislative restrictions in the state, there is a lack of targeted research exploring Arkansans' support for and knowledge of these restrictions. Based on the little public opinion research conducted with Arkansans, constituents' attitudes toward abortion may not be as conservative on abortion as their state laws might suggest. Approximately 68% of young adults from Arkansas and Oklahoma indicated support for abortion access under all or at least some circumstances (Jozkowski, Crawford, & Hunt, 2018).

Similarly, according to a state-wide Arkansas telephone survey poll conducted in 2017, about 60% of Arkansans thought abortion should be legal under at least some circumstances (Parry, 2017). However, Arkansans' general feelings seem to be mixed with regard to women who seek abortions. Approximately twenty-two percent of the sample reported feeling extremely negative toward these women, 14.6% felt extremely positive, and 62.9% fell somewhere in the

middle (Parry, 2017). There is no research to date exploring Arkansans' knowledge of restrictions in their state. Arkansans' attitudes toward abortion restrictions may not actually align with those legislators who passed these laws. Instead, potentially because of lack of knowledge, support for these restrictions may be high among Arkansans. Therefore, intervention is needed to address support for abortion restrictions in their state. This can be done by providing education about the potential impact of these laws in terms of limiting women's access to abortion.

Knowledge and Support of Restricting Abortion Access

Research suggests that U.S. residents are conflicted in terms of their feelings on abortion restrictions and abortion access. Public opinion data show that the majority of people report they believe abortion should be legal under all or at least some circumstances, without burden or logistical difficulty, and informed by medically accurate and unbiased information (PerryUdem & Vox Media, 2016; Smith & Son, 2013). At the same time, they exhibit high support for laws such as 24-hour waiting periods, parental consent for minors, and doctors informing patients of alternatives or possible risks of obtaining an abortion (no matter if they are scientifically evidenced; Bowman & Sims, 2017; PerryUdem & Vox Media, 2016). These laws directly conflict with people's reported beliefs about abortion access. It seems as though people either do not understand that such restrictions are burdens or result in logistical difficulty.

According to PerryUdem and Vox Media's (2016) probability-based public opinion poll, almost half (46%) of the sample reported they did not think there was a law that would require doctors to provide medically inaccurate information about abortion. In reality, twenty-nine states require physicians to follow a script warning patients about the potential risks and side effects of abortion (e.g., breast cancer), which are medically inaccurate or misleading (Nash et al., 2017; Vandewalker, 2012).

Yet, the issue of abortion restrictions is more complex than simply understanding the laws. Even when people have some awareness of the laws in their areas, it does not equate to understanding their impact on abortion care. In a sample of Texans who reported they were aware of and supported current Texas abortion laws, 42% expressed the main reason for their support was because they believed the regulations made abortion safer (White et al., 2016).

This support is perpetuated by the pretense that restrictions protect women's safety or ensure they have time to deeply consider their decision (Weitz, Moore, Gordon, & Adler, 2008). First, researchers indicate there are no differences in the safety or success of abortions when conducted in facilities that must adhere to extensive Targeted Regulation of Abortion Providers (TRAP) laws compared to those that do not (Grossman et al., 2011; Jones & Weitz, 2009). Thus, the idea that restrictions protect women's safety is false. Second, legislation requiring a waiting period or biased counseling prior to an abortion increase financial and logistical obstacles (Guttmacher Institute, 2017h; Karasek, Roberts, & Weitz, 2016). These restrictions result in a patronizing or paternalistic effect, delaying abortion and infringing on bodily autonomy. Further, in most cases, these laws rarely change women's decisions to terminate their pregnancy, because women have already deeply considered their decision (Blasdell, 2002; Wiebe & Adams, 2009). Therefore, inhibiting women's ability to obtain an abortion, not health or safety, seems to be the primary goal of such restrictions.

With continued misunderstanding and unawareness of the laws, people who support abortion access will continue to support restrictions under the impression that they improve abortion experiences. There is little research on Arkansans' knowledge and support for abortion restrictions. If Arkansans' knowledge about abortion is similar to U.S. adults' knowledge according to national polls, they may also demonstrate high support for restrictions, potentially

based on misinformation. That is why there is a need to increase awareness of how these laws affect people who seek abortion care. This is especially crucial for people who live in highly restrictive regions of the U.S.

The Current Study

The purpose of the current study was to create a video intervention to decrease support for abortion restrictions in Arkansas. To do this, we aimed to increase awareness about current legislation and its effect on Arkansan women who seek abortions. One of the best mechanisms to increase knowledge with sexual health topics is to include information in digital form (e.g., social media, films; Blas et al., 2010; Conceicao, Pedro, & Martins, 2017; Downs, Murray, de Bruin, Penrose, Palmgren, & Fischhoff, 2004; Guse et al., 2012). When knowledge is increased, people are more inclined to empathize for another person's situation and struggles (Currier & Carlson, 2009; Plumm & Terrance, 2009). With this in mind, we aimed to decrease Arkansas residents' support for abortion restrictions by increasing their knowledge of the abortion landscape in their state via a video news story and several testimonials of women seeking abortions in Arkansas.

The intervention was administered as a randomized-controlled video-based experiment, with a pre-test, post-test, follow-up design. There were five versions of the administered videos: one control condition and four intervention condition versions. Those in the control condition watched the short informational video (a "news anchor" giving a news report about abortion legislation in Arkansas). Those in the intervention conditions watched the same informational portion followed by an actor delivering one of four different testimonials. The actor described the barriers she faced as a result of Arkansas legislative restrictions. For the purposes of this paper, we tested whether adding a personal story was more effective in inducing the

hypothesized outcomes than watching a video that only contained an informational component. As such, we compared the control to all combined intervention video conditions at pre-, post-, and follow-up. The research questions and hypotheses were as follows:

RQ1. Does knowledge of abortion restrictions differ between experiment and control video conditions across the time points? We hypothesized that H1) disregarding video condition, all participants will experience an increase in Arkansas abortion restriction knowledge; all participants received the same informational component.

RQ2. Does support for abortion restrictions differ between experiment and control video conditions across the time points? We hypothesized that H2) there would be a larger decrease in support for abortion restrictions for those in an intervention condition compared to the control video. Those who hear a personal story may be influenced by learning about the negative effect on those who seek abortions in Arkansas (Currier & Carlson, 2009; Plumm & Terrance, 2009).

Methods

Participants

A convenience sample of Arkansas residents were recruited through social media (e.g., Arkansas specific Reddit and craigslist pages, Facebook), word of mouth, email, and listservs to take part in a paid research study through Qualtrics survey software. Three pre-screening questions were administered to check for eligibility criteria: participants had to be 1) currently living in Arkansas, 2) aged 18 or older, and 3) a native English speaker or have attended school where English was the primary language from K-12. If a participant met the eligibility criteria, they were administered an informed consent page, and could begin the survey.

The minimum number of participants required was determined by an a priori power analysis (G*Power: Faul et al., 2007) with power (1 - β) set at .80, $\alpha = .05$, two-tailed, and a medium effect size of .25 (Cohen, 1977, 1988). Approximately 2,400 people clicked on the recruitment link from a social media platform to learn more about the study. Of those, 691 participants opted to take the survey. During data cleaning, participants were removed for ineligibility, failing reading checks or incomplete surveys, and failure to complete all three points of data collection (attrition rate of 33.6%). The exclusion process is described with the survey flow in Figure 4.1. The full analytic sample of participants who completed all three waves of data collection ($N = 369$) comprised 106 participants in the control condition and 263 participants in the intervention conditions ($N_1 = 62$; $N_2 = 70$; $N_3 = 60$; $N_4 = 71$).

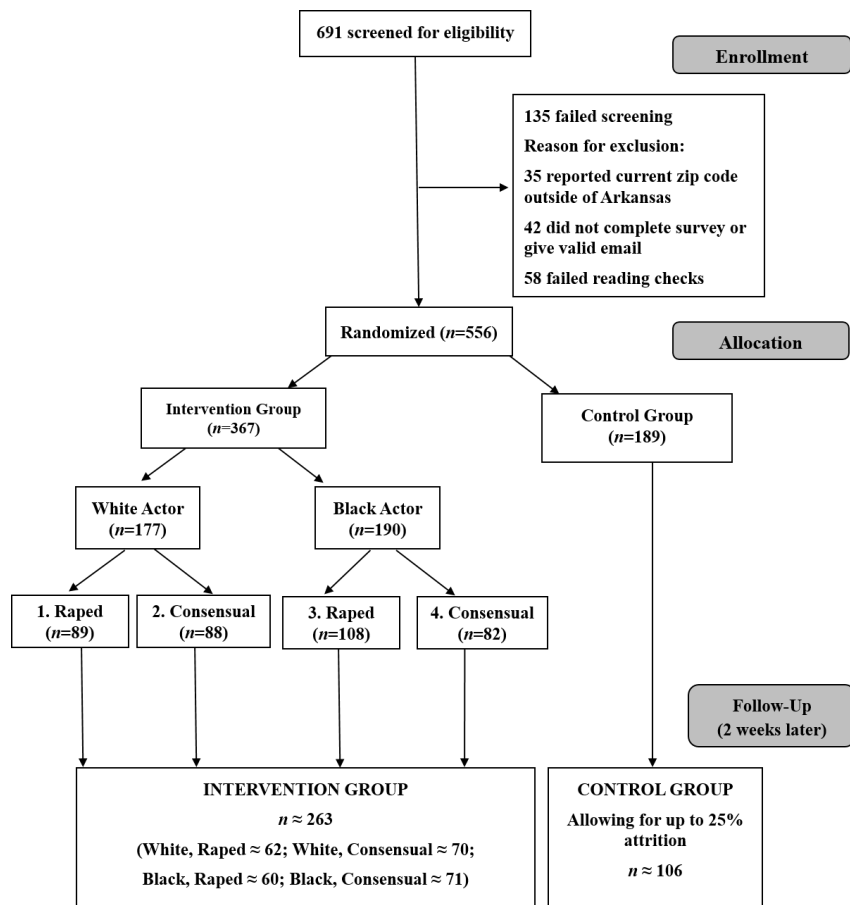


Figure 4.1. Sample size and survey flow.

The majority of the participants identified as female (71.5%), White (84.6%), heterosexual (89.2%), and “pro-choice” (72.9%). The mean age was 32.07 ($SD = 9.44$) and participants reported living in Arkansas for an average of 21.36 years ($SD = 12.14$). General knowledge of abortion was evaluated at baseline with 16 items on safety, legality, and prevalence (based on Bessett et al., 2015; Kavanaugh, Bessett, Littman, & Norris, 2013). We performed a median split to create three artificial abortion knowledge levels; the scores ranged 0 to 16). Most of the sample (71.0%) exhibited a medium level of abortion knowledge, 14.9% had a low level (1 SD below the median), and 14.1% had a high level (1 SD above the median). Demographic frequencies for the sample are reported in Table 4.1.

Procedures

The study was a randomized-controlled trial with a pre-, post-, follow-up design; participants were randomly assigned to one of five video conditions (see Figure 1 for survey flow). All participants took the pre-test and were triaged into watching a specific informational video clip about current restrictions in Arkansas (aimed at increasing participants’ knowledge about abortion restrictions). The control condition then immediately received a post-test.

After the informational portion, participants in the intervention condition watched one of four versions of a testimonial video clip. Each testimonial portrayed a woman speaking about her difficulty obtaining an abortion in Arkansas because of the restrictions. After the testimonial clip, the intervention condition received the post-test. At the end of the post-test, participants were asked to provide an email address to receive a \$10 e-gift card and the link to the follow-up survey two weeks later to test for rebound effects (Aron, Aron, & Smollan, 1992; Johansson-Love & Geer, 2003). Participants received another \$10 e-gift card after the follow-up survey and

then their email was removed from the data. The Institutional Review Board at the institution of data collection approved all procedures.

Intervention Videos

Content. A team of five experts in public health, sociology, media communication, and an abortion researcher contributed toward creating the video content (e.g., casting, script development, visual aids), which was guided by several media persuasion strategies. For example, to establish credibility of the source (Petty & Priester, 1994), the news anchor character stated that she was a graduate student in public policy who is an expert in reproductive health policy at the institution of data collection. By localizing the news anchor (e.g., tying her credibility and narrative to Arkansas), the audience is more likely to pay attention to the information (Devereux, 2007; Golding & Elliott, 1979; Wahl-Jorgensen & Hanitzsch, 2009).

Further, when explaining the restrictions in Arkansas, she framed the information in second-person language to create personal relevance (e.g., “*if you’re under 18, you have to get permission from a parent...*”; Burnkrant & Unnava, 1989). The first author created a visual aid graphic per each restriction description, which were projected during the news story to enhance comprehension (e.g., Lee, Lee, Liao, & Wang, 2015). There were two conceptual portions of the video: informational and testimonial (see Script for complete wording).

Informational portion. This portion consisted of a news anchor, “Michelle,” briefly informing participants about the safety, legality, and types of abortion. She describes the magnitude with which restrictions have been passed in recent years, particularly in Arkansas. Then she outlines and explains the legislative restrictions that augment the behaviors of patients

and doctors for abortion provision. The news anchor ends the clip describing how these restrictions have affected accessibility (i.e., the number of facilities) in Arkansas.

Testimonial portion. This portion begins with an introduction by the news anchor. Then the character, “Mia,” describes her economic troubles and experience becoming unexpectedly pregnant and seeking an abortion. She details the obstacles that made obtaining an abortion in Arkansas more difficult because of restrictions (e.g., lack of insurance coverage, necessitated travel and waiting period increasing costs). She concludes the video by stating that these restrictions made it harder for her to obtain an abortion. The four versions varied by race of the woman giving the testimonial (i.e., Black or White) and situation that lead to the pregnancy (e.g., rape or consensual sex). All versions of the intervention testimonial were similar in terms of length and wording (Ryffel & Wirth, 2016).

Production. The investigators hired three actors (i.e., one news anchor and two testimonial women) from the theater department at the institution of data collection to deliver the video content. As part of the larger study, we were interested in understanding the role of race and perceived pregnancy responsibility on attitudes toward abortion access. We manipulated both of these factors in the testimonial video clips. They were manipulated in order to target and increase empathy for women who seek abortions in Arkansas. However, for the purpose of this study, we were solely interested in examining the effect of administering a personal story on knowledge retention and support for abortion restrictions. As such, we will compare participants who received the control—with no testimonial—to participants who received any intervention or any video with a testimonial.

Measures

Knowledge of and support for abortion restrictions. Authors compiled a list of 18 abortion restrictions in the 10 most common restriction categories in the U.S. (Nash et al., 2017) to measure Knowledge of Abortion Restrictions (KAR) and Support for Abortion Restrictions (SAR). Before administration, we pilot tested the survey instrument with a convenience sample of researchers ($n = 14$) to assess for clarity and readability. During the experiment, these measures were administered at all three data collection points (pre-test, post-test, and follow-up). Item examples included “*Before an abortion, doctors must tell women that it possible for the abortion pill to be reversed*” and “*Abortions have to be administered by a licensed doctor (not a nurse practitioner or other healthcare provider).*” The full list of items is included in Tables 4.4 and 4.5.

To assess KAR scores, for each item, participants were instructed to indicate, “based on what they know or have heard,” which restrictions apply to Arkansas (e.g., select “Yes, current law in Arkansas” or “No, not a current law in Arkansas”). Items were coded dichotomously for accuracy (i.e., 0 for incorrect or 1 for correct) and were aggregated to yield a score of 0-18, with higher scores indicating greater knowledge of abortion restrictions in Arkansas.

To measure SAR scores, participants were instructed to indicate the extent that they agreed that each restriction should be a law in Arkansas [on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree)]. Each item had a consistent stem of “It should be a law in Arkansas that...” An example branch included “*A woman must wait 48 hours after required counseling before the abortion can be performed.*” Total scores were aggregated and could range from 18-90, with higher scores indicating greater support for restrictions on abortion in Arkansas.

Marlowe-Crowne desirability scale-short form (Ballard, 1992; Reynolds, 1982). To assess the degree to which participants' self-report data may be susceptible to social desirability bias, we administered this scale in the pre-test. The short form is 11 items rated "true" or "false" as it pertains to the participant; half are reverse coded. An example item is "*I have never been irked when people expressed ideas very different from my own.*" Low scores indicate that participants may be more willing to answer truthfully even when answers might meet social disapproval, whereas high scores may mean participants are highly concerned with social approval.

Source-credibility scale (Ohanian, 1990). Two weeks after participants had watched the video, they were asked to evaluate their actor (i.e., source) on a series of 9-point bipolar scales. The assessment comprised 15 items on attractiveness, trustworthiness, and expertise. Participants were shown a picture of the actor(s) that applied to their assigned video condition and rated the particular actor on each item. Lower scores indicate more perceived credibility of the source; total scores ranged from 15 to 135 and subscale scores ranged from 9 to 45 on each subscale.

Confounding factors. The follow-up survey included three questions about personal experiences in the 2 weeks after post-test. We asked if they sought out any media relevant to abortion or abortion restrictions, and if they knew anyone who sought an abortion in the last two weeks. We also asked if they knew any of the actors to account for biases related to familiarity.

Analyses

All data were downloaded from Qualtrics Survey Software into SPSS 24 for analyses. First, we ran analyses to check data quality. We ran chi square analyses on demographic variables and independent samples *t*-tests on the pre-test outcome variables. These comparisons

were conducted to evaluate group differences between the video conditions and assess for accurate randomization. Then, we ran univariate comparisons between participants who completed all three points of data collection and those who dropped out after post-test. Last, we conducted t-tests and univariate comparisons on source credibility scores, social desirability scores, and confounding factors. We accounted for Type I error by using a Bonferroni correction in all analyses with multiple comparisons.

Following descriptive measures, repeated measures analysis of variance (ANOVA) with a multivariate approach were used to examine differential changes across times on KAR scores (RQ1) and SAR scores (RQ2) between intervention and control groups. When the interaction was significant, we explored the simple effects by examining differences between time points (i.e., pre-test and post-test, post-test and follow-up, pre-test and follow-up) with a Bonferroni correction. When the interaction effect was not significant and the main effects were significant, we conducted a post-hoc univariate tests to assess simple effects. We reported partial eta-squared (η_p^2) as a measure of effect size for the analyses of variance. A value of .01 indicates a small effect size, .06 medium, and .14 large (Cohen, 1988).

Results

Baseline

First, we ran chi-square analyses to assess differences in demographic variables by video condition (see Table 4.2). There were no significant differences between the control and experimental group by sex, abortion experience, or level of abortion knowledge. There were significant differences by race, [$X^2(2, N = 369) = 11.443, p = .001$], income level, [$X^2(2, N = 369) = 11.942, p = .003$], education, [$X^2(3, N = 369) = 22.352, p < .001$], and abortion identity, [$X^2(2, N = 369) = 19.043, p < .001$]. Post hoc pairwise Fisher's exact tests with a Bonferroni

correction indicated, in the intervention group, there were significantly higher proportions of people who were White ($p = .001$), low-income ($p = .008$), had a college degree ($p < .001$), and identified as “pro-choice” ($p < .001$). In the control, there were significantly higher proportions of people who were non-White ($p = .001$), high-income ($p = .002$), had completed a GED/high school education or less ($p = .002$), and identified as “pro-life” ($p < .001$).

Next, we examined baseline differences by our dependent variables (i.e., KAR and SAR scores). KAR scores violated the normality assumption ($p = .006$). With equal variances not assumed, there were no significant differences between the control group and experimental group on KAR scores, [$t(159.03) = -1.31, p = .193$], at baseline. SAR scores upheld the normality assumption ($p = .765$). With equal variances assumed, there were no significant differences between the control group and experimental group on total SAR scores, [$t(367) = .466, p = .642$], at baseline. Because there were no differences in our dependent variables at baseline, we did not account for differences in demographics but address them in the discussion. Additionally, we compared baseline KAR and SAR scores by participant abortion identity (i.e., “pro-life,” “pro-choice,” “other). There were no differences in KAR scores by abortion identity, [$F(2, 366) = 1.08, p = .339$]. There were significant differences in SAR scores by abortion identity, [Welch’s $F(2, 84) = 50.77, p < .001$]. “Pro-life” participants had significantly higher support for abortion restrictions than “pro-choice” or “other” ($p < .001$).

We also made comparisons on demographic characteristics and our dependent variables between participants who completed all three time points and those who dropped out after the post-test ($N = 192$). There were no differences by sex, abortion experience, or income. However, there were differences by level of abortion knowledge [$\chi^2(2, N = 556) = 25.510, p < .001$], race [$\chi^2(1, N = 556) = 36.147, p < .001$], education [$\chi^2(3, N = 553) = 24.741, p < .001$], and [$\chi^2(2, N$

= 556) = 59.883, $p < .001$]. Post hoc comparisons indicated people with a low knowledge of abortion, people who are non-White, and “pro-life” individuals had a higher drop-out rate (all p 's $< .001$). People with a medium level of abortion knowledge and people with some college education had a higher rate of completing the study (all p 's $< .001$). There were no differences on KAR scores [$F(1, 554) = 2.893, p = .09$], but those who continued on throughout the entirety of the study had significantly lower baseline SAR scores than those who dropped out [$F(1, 554) = 13.547, p < .001$]. This difference is discussed in the limitations.

Source-credibility. We assessed the degree that participants found the information sources (actors) to be credible on a scale of 15--135, with lower scores indicating higher perceived credibility (Ohanian, 1990). The mean credibility score was 49.57 ($SD = 22.11$) for Michelle (the news anchor), 64.09 ($SD = 22.99$) for the White testimonial woman, and 62.80 ($SD = 27.71$) for the Black testimonial woman. Paired-samples t -tests indicated participants found Michelle to be significantly more credible overall compared to both the testimonial actors who were White, [$t(131) = -7.24, p < .001$], and Black, [$t(130) = -6.16, p < .001$]. Univariate comparisons indicated there were no significant differences in perceived credibility between the two testimonial actors, [$F(1, 261) = .169, p = .682$].

Social desirability. We assessed the degree that participants' self-report data may be susceptible to social desirability bias on scale of 0--11, and found the mean score was 5.03 ($SD = 2.15$) indicating a need to conform to social desirability as measured by this scale was only a moderate factor. There were no differences in social desirability scores between the control and intervention conditions, [$t(367) = .083, p = .934$].

Confounding factors. Only 47 participants (12.7%) reported seeking out media on topics related to abortion and abortion restrictions in Arkansas in the two weeks between the post-test and follow-up survey. Six participants reported familiarity with an actor. Additionally, only 33 participants (8.9%) reported a personal experience with abortion occurring during the two-week period. There were no differences in follow-up KAR or SAR scores among those who reported seeking out related media [$F_{KAR}(1, 362) = .003, p = .954$], [$F_{SAR}(1, 362) = .035, p = .851$], or those who reported familiarity with an actor [$F_{KAR}(1, 367) = 1.24, p = .265$], [$F_{SAR}(1, 367) = 1.05, p = .305$]. However, those who reported abortion experience during that time had significantly lower follow-up KAR scores [$F(1, 367) = 13.09, p < .001$] and higher SAR scores [$F(1, 367) = 14.173, p < .001$] than those who did not. With the small sample size, the difference in KAR and SAR scores between these individuals could have had a small impact on the effect of the interventions across the study.

Descriptive Statistics

Knowledge of abortion restrictions. Mean KAR scores at baseline were 9.68 ($SD = 1.76$), indicating that out of 18 restrictions, people correctly identified a little over half. As expected, scores increased at post-test ($M = 12.32, SD = 2.44$). On average, people correctly identified 2-3 more restrictions from pre-test to post-test ($M_{Gain} = 2.64, SD = 2.49$). Scores decreased slightly two-weeks later ($M = 11.21, SD = 1.95$); People correctly identified on average one less restriction at follow-up than they did at post-test ($M_{Gain} = -1.10, SD = 2.16$). However, overall gains across the study, from pre-test to follow-up, indicated they correctly identified 1-2 more restrictions at follow-up than they did at baseline ($M_{Gain} = 1.53, SD = 2.27$).

The top three restrictions correctly identified as applying to Arkansas at pre-test were “Minors must get a parent’s permission before they can get an abortion” (88.1%), “Medicaid

(insurance for people who are low-income) can *only* cover abortions in cases of the rape and incest or if the woman's life is in danger" (71.8%), and "A woman cannot get a dilation and extraction abortion which is often performed after the 20th week of pregnancy" (71.8%). On average, accuracy percentages increased by 13.4% after watching the video. However, one restriction, "A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is in danger," increased 71.3% in accuracy from pre-test to post-test. See Table 4.3 for descriptive values and Table 4.4 for accuracy frequencies across the study.

Support for abortion restrictions. At baseline, average SAR scores were 60.40 ($SD = 19.12$) on a range of 18 to 90 with high scores indicating high endorsement of restrictions. People began the study highly endorsing about 58% of the restrictions listed. After watching the video, the average decreased to 56.41 ($SD = 21.43$), suggesting the magnitude of people's support for restrictions decreased from pre-test to post-test ($Gain_M = -3.99$, $SD = 8.75$). However, at the two-week follow up, support had gone up slightly ($M = 57.53$, $SD = 21.57$). The average score gain from post-test to follow-up was 1.12 ($SD = 8.24$). Overall, gain scores across the whole study from pre-test to follow-up indicated a decrease in magnitude of support for abortion restrictions, albeit small ($M = -2.87$, $SD = 10.06$). Despite this decrease, many participants indicated support for most restrictions in Arkansas (i.e., selected either strongly agree or agree it should be a law in Arkansas).

At pre-test, the top three restrictions with the highest support were "Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)" (endorsed by 76.7%), "Before an abortion, doctors must tell women that the abortion can cause negative psychological effects" (endorsed by 74.0%), and "Facilities that provide abortions have to adhere to *ambulatory surgical standards* (e.g., hallways have to be a certain width, requires extra

nursing staff, has to be within a certain distance to a hospital)” (endorsed by 72.6%). These three restrictions, licensed doctor, negative psychological effects, and ambulatory surgical standards, had the highest support at follow-up as well, although the percentages declines slightly (i.e., 66.2%, 66.3%, and 66.9% respectively). On average, support for restrictions percentages decreased by 3.4% across the study. The restriction with the biggest decrease across the study was “Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)” with a 10.5% decrease from pre-test to follow-up. See Table 4.3 for descriptive values and Table 4.5 for frequencies at the opening (e.g., pre-test) and close of the study (e.g., follow-up).

Repeated Measures

Knowledge of abortion restrictions. First, we examined if there were differences in KAR scores by video condition across the three time points (RQ1). Our findings suggest there was a statistically significant interaction between the effects of time and video condition, [$F(2, 366) = 8.51, p < .001$; Wilks' $\lambda = .96, \eta_p^2 = .04$]. This significant interaction indicates there were differences in knowledge scores across the study by intervention or control. However, the overall effect size was small. Simple effect comparisons indicated those in the intervention condition had significantly higher KAR scores than those in the control at post-test, [$F(2, 366) = 151.94, p < .001, \eta_p^2 = .454$] and at follow-up, [$F(1, 367) = 25.96, p < .001, \eta_p^2 = .066$]. Specifically, 1) pre-test knowledge scores ($M = 9.62$) were significantly lower than post-test ($M = 12.09$) and follow-up scores ($M = 10.93$), 2) post-test scores were significantly higher than pre-test and follow-up scores, and 3) follow-up scores were significantly higher than pre-test but significantly lower than post-test scores (all p 's $< .001$). Thus, hypothesis 1 was not supported because

knowledge scores for those in the intervention video condition were significantly higher than those in the control video condition (see Figure 4.2 for graphical illustration).

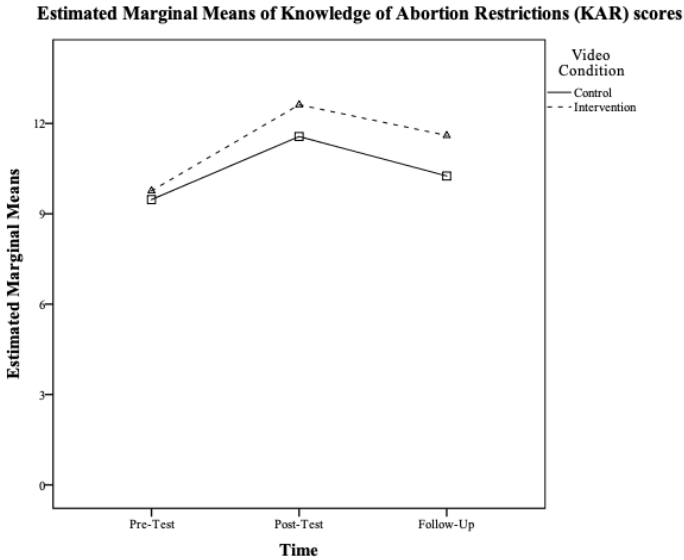


Figure 4.2. Graphic illustration of results of repeated-measures of variance that examined the effect of time (pre-test, post-test, and follow-up) and video condition (control and intervention) on Knowledge of Abortion Restrictions scores.

Support for abortion restrictions. Next, we examined if there were differences in SAR scores by video condition across the three time points (RQ2). Our findings suggested that the interaction between the effects of time and video condition was not statistically significant, [$F(2, 366) = 2.93, p = .055$; Wilks' $\lambda = .98, \eta_p^2 = .02$], indicating there were no differences in support scores across the study by video condition. There was a main effect for time [$F(2, 366) = 27.123, p < .001$; Wilks' $\lambda = .871, \eta_p^2 = .13$], such that there were significantly higher SAR scores at pre-test ($M = 60.40, SD = 19.11$) than post-test ($M = 56.41, SD = 21.43$) and follow-up ($M = 57.53, SD = 21.57$). Post-test scores were significantly lower than pre-test and follow-up, and follow-up scores were significantly lower than pre-test but significantly higher than post-test. The effect for video condition was also not significant, [$F(1, 367) = 1.10, p = .296, \eta_p^2 = .003$], therefore,

hypothesis 2 was not supported because there were no differences in SAR scores by video condition (see Figure 4.3 for graphical illustration).

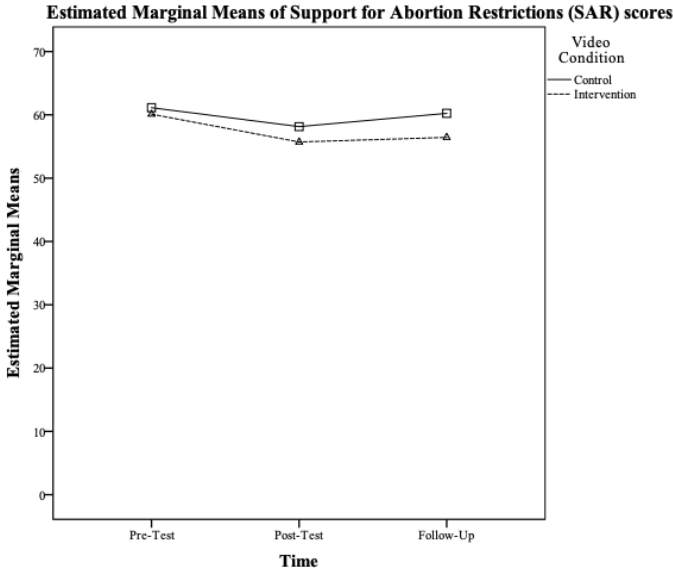


Figure 4.3. Graphic illustration of results of repeated-measures mixed analyses of variance that examined the effect of time (pre-test, post-test, and follow-up) and video condition (control and intervention) on Support for Abortion Restrictions scores.

Discussion

The purpose of the study was to evaluate the effectiveness of a video intervention intended to increase awareness of abortion restrictions in Arkansas and decrease Arkansans' support for these restrictions. Overall, Knowledge of Abortion Restrictions (KAR) scores significantly increased after watching the informational video (at post-test) and declined slightly two-weeks later (at follow-up); there was still an increase in knowledge from baseline to the two-week follow-up. Additionally, for KAR scores, there was a significant interaction between time and video condition, although the effect size was small. Contrary to our hypothesis, knowledge scores of those who received an intervention video were significantly higher at post-test and follow-up than those in the control.

Overall, Support for Abortion Restrictions (SAR) scores decreased after watching the video; SAR scores decreased from pre-test to post-test and slightly increased two weeks later at follow-up. However, there were no significant differences in SAR scores by video condition. This finding was inconsistent with our hypothesis.

Knowledge of Abortion Restrictions

We intended for the informational portion to increase knowledge of abortion restrictions over time and we achieved those results. The effect size was small and, thus, the implications for these results should be approached with caution. A strength of this study was that people received evidence-based information from a person who they perceived as credible—source-credibility for the news anchor was high. Opposing what we expected (e.g., no differences between video conditions), participants who received the intervention condition (i.e., watched a personal testimonial following the news story) had significantly higher knowledge scores compared to those who received the control condition. There are several possible explanations for these findings.

First, it may be that those in the intervention condition had higher overall KAR scores because they received repeat information on restrictions specific to Arkansas. For example, the news story described 48-hour waiting periods as a restriction in Arkansas. Then, the woman in the testimonial described her experience waiting 48 hours to get her abortion. The reiteration could have led to better knowledge retention for those that watched a testimonial in addition to the news video compared to those who only watched the news video.

Second, differences in demographic characteristics of our sample could have affected knowledge retention between control and intervention conditions. In the intervention condition,

there were proportionally more people who identified as White, low-income, “pro-choice,” and with a college degree. In contrast, there were more participants in the control who identified as non-White, higher-income, “pro-life” and who had not attended college. Those who identify as “pro-choice” and who are more highly educated may have been more open to learning about abortion restrictions. Research shows these demographic factors are associated with permissive attitudes toward abortion (e.g., Smith & Son, 2013; Strickler & Danigelis, 2002; Wang, 2004). The same can be said for people who are low-income; they may have been able to identify with the economic struggles described by the woman in the testimonial (Woodhams et al., 2016). Educated “pro-choice” people also may have also started the study with knowledge about abortion restrictions. Thus, the effect size might have been small because the magnitude of knowledge gain may have been affected by this.

To our knowledge, there is no recent evidence-backed reason as to why race might affect knowledge retention about abortion. Research on race and abortion attitudes indicates varied trends, but suggests African American or Black people have more permissive attitudes toward abortion than White people, citing an impact from the Reproductive Justice movement (Forward Together, 2019; Strickler & Danigelis, 2002). However, older literature suggests that racial differences are confounded by other demographic factors (e.g., religion, gender; Hall & Ferree, 1986; Lynxwiler & Gay, 1994; Secret, 1987). Thus, especially with our small non-White sample size, the difference in race between video conditions could have had little effect on the difference in knowledge scores across the study. Interestingly, these demographic differences did not have an effect on support for restrictions by video condition (discussed in the next section).

Last, people in the experimental condition could have had better retention because they incorporated facts and feelings they learned from the video. When knowledge is increased,

people are more inclined to empathize with another person's situation and want to lessen their struggles (Currier & Carlson, 2009; Plumm & Terrance, 2009). Therefore, people who heard a testimonial may have been more open to hearing the story because their awareness of the restrictions had increased. Then, in turn, connecting what they learned to their feelings for the testimonial could have reinforced what they had learned. When people are more educated about the legislative environment associated with a particular issue, an intervention may be more effective in shifting attitudes about the legislation. As such, it may be important for educators and researchers to be thorough in providing context when using testimonial interventions.

However, another contribution to people's support for restrictions may be related to their personal experiences. In the two weeks between post-test and follow-up, the 33 people who reported either a primary or secondary abortion experience had significantly higher support for restrictions and significantly lower knowledge. One would expect that if they had experienced these obstacles first hand, they would have higher knowledge and lower support for restrictions. It is possible these experiences were not positive or our participants were not intimately involved in the process. Thus, their knowledge did not increase and they remained supportive of restricting access. We did not assess for more information about these recent experiences so we cannot glean potential reasons for having higher support and lower knowledge scores. These differences suggest personal experiences may be just as important on people's support for restrictions.

Support for Abortion Restrictions

Although the intervention video increased knowledge, there were no differences in support for restrictions by video condition. We predicted that a story demonstrating the real-life implications of restrictions in Arkansas would decrease support for these laws compared to a

video that only disseminated information (i.e., no testimonial). The testimonial did not have the hypothesized effect.

Disregarding video condition, results indicated that support for restrictions at the end of the study was significantly lower than those at baseline. However, support for restrictions at follow-up remained higher than anticipated. An explanation may be that even though the majority of participants identified as “pro-choice,” people may want to restrict abortion access or may not understand how restrictions truly impact people’s lives. Adjusting attitudes on this subject may require a larger cultural shift.

This cultural shift necessitates the widespread debunking of the myth that restrictions are mechanisms of health and safety for women seeking abortions (Weitz, Moore, Gordon, & Adler, 2008). To illustrate the way these restrictions perpetuate this myth, we describe several examples of the laws that were addressed in the informational portion of our video. For each, the news anchor described the Arkansas restriction and briefly explained the consequence of this mandate. Yet, these examples retained support from over half of the sample at the end of the study.

For example, the news anchor stated that in Arkansas “[an] *abortion has to be performed by a licensed doctor, which means if you usually go to a health professional like a nurse practitioner, you have to go to a different place.*” At the conclusion of the study, 66.2% of the sample agreed that requiring abortions to be provided by a licensed physician should be a law in Arkansas. Ostensibly, it seems positive that abortions should only be provided by “licensed physicians”. However, as a result, advanced practice clinicians (i.e., certified nurse-midwives, nurse practitioners (NP), and physician assistants (PA)) are unable to provide either procedural or medication abortions in states with this law. This mandate is in effect in many states despite

the fact that these providers have the necessary and relevant skills to provide these services with the same risk of complications compared to physicians (Taylor et al., 2009; Weitz et al., 2013).

Preventing these health professionals from providing abortion services limits locations that can offer abortion care. These laws further divide those who are able to afford abortions and those who are not. Often, low-income individuals and women of color are more likely to receive care at public health departments or community health centers, where NPs and PAs provide the majority of healthcare services (Grumbach, Hart, Mertz, Coffman, & Palazzo, 2003; Schacht, 2008; Taylor et al., 2009; Weitz et al., 2013). Therefore, these populations are particularly negatively impacted by these laws because they do not typically have access to physicians. It is possible that this outcome is not obvious with a basic interpretation of restrictions, among people with privilege who do not have to think about what categories of health professionals they have access to. Two-thirds of our sample reported being mid-income or higher and the majority identified as White, therefore such privilege may apply to many of our participants. The implications of this mandate are complicated and may be difficult for someone to fully appreciate on their own. Perhaps more explicit linking of these restriction to real life implications is necessary in the video beyond what was already provided.

Another example of a restriction painted as a health and safety measure is parental involvement laws. In the video, the news anchor describes this Arkansas law as: *“If you’re under 18, you have to get permission from a parent. Research shows it delays the procedure or teens may travel to states without these laws to get an abortion.”* Parental permission was endorsed by 60.1% of the sample at the conclusion of the study. People may support parental laws for reasons such as minors having a guardian to accompany them to doctor’s appointments, ensure they

understand any procedures, and provide emotional support (American College of Pediatricians, 2016).

Often, regardless of laws, minors do involve parents in their medical decisions. However, Blasdell (2002) points out that if a minor decides not to involve their parents, their decision is due to safety or necessity (e.g., threat of domestic violence, getting kicked out). In the years following the implementation of these laws (i.e., 1974-1988), the overall number of teen abortions did decrease dramatically (Blank et al., 1996). But rates of abortions after 13 weeks and teens traveling to another state to obtain an abortion also increased (Blasdell, 2002; Dennis, Henshaw, Joyce, Finer, & Blanchard, 2009). Therefore, these laws often result in either increased financial and logistical burden on minors to obtain an abortion while avoiding involving their parents, forced birth, or risk to their safety.

For these reason and others, the leading medical groups in the U.S. (e.g., American Public Health Association, American Medical Association, the American Academy of Pediatrics) publicly oppose parental involvement laws (American Civil Liberties Union, 2018). Laypersons may endorse this restriction because they feel minors should involve their parents in the decision to have an abortion. But such restrictions privilege minors who have positive relationships with their parents and penalize those who do not (e.g., victims of incest).

A final example is biased counseling laws. Regarding this topic, the news anchor states: *“During the counseling session, doctors are required to tell patients that it is possible for a medication abortion to be reversed after the first dose of pills, which is not backed up with medical evidence.”* Then, later she goes on to say *“...other states require doctors to talk about*

the link between abortion and breast cancer or negative mental health outcomes. None of this information is evidenced by medical research.”

In spite of this information, at the end of the study, 66 percent of the sample agreed physicians should be required to give pre-counseling information on negative psychological outcomes following abortion. Fifty-five percent agreed counseling should include the link with abortion and increased risk of breast cancer (54.5%). And 59.5% agreed doctors in Arkansas should tell women about the reversal of a medication abortion. If people think that abortion really does increase breast cancer, depression, and can be reversed, then doctors being required to tell patients about these risks seems positive. However, these claims are not supported by methodologically sound evidence (e.g., Charles, Polis, Sridhara, & Blum, 2008; Grossman et al, 2015; Grossman & White, 2018; Guttmacher Institute, 2017g; National Academy of Sciences, 2018). As these messages continue to be perpetuated by politicians and trusted doctors who are required to say them, people will continue to doubt whether women should freely make decisions about their bodies.

Even though support for abortion restrictions in Arkansas decreased over the study, they remained problematically high. Until there is a cultural shift that debunks these myths, there will continue to be difficulties decreasing support for restrictions. Because these laws are marketed as helpful to women who seek abortions, an opposing stance “appears unsupportive of women” (Weitz et al., 2008, p. 87). With the norming of “call-out culture” (Mendes, Ringrose, & Keller, 2018, p. 1) with respect to sexism and gender discrimination (e.g., the #MeToo movement), some people may feel pressured to conform to a societal norm in which they support (or appear to support) women. In a culture of hostility toward women’s reproductive choice, it seems to be hurting the cause to oppose efforts that inform women of the full spectrum of risks associated

with abortion and ensure they are provided with an opportunity to consider their options. If these laws appear to protect and help women, people end up simultaneously supporting abortion access *and* the laws that would restrict access (Bowman & Sims, 2017). It is important that people realize that with these restrictions, women will only continue to have theoretical access to abortion, not practical access. And it is imperative that people, especially those who live in hostile states like Arkansas, work to understand and abolish the mechanisms that obstruct access to bodily autonomy.

Limitations and Future Research

Using a randomized-controlled design, this study examined the effects of an innovative media intervention on abortion knowledge and endorsement of abortion restrictions in Arkansas. Although the design was rigorous, there are several limitations worth mentioning. The sample consisted of current residents of Arkansas who volunteered to participate in a study about attitudes toward abortion. Therefore, although they were randomly assigned to conditions, they were not randomly selected from the population and therefore findings are not fully generalizable to the population of Arkansas. Participants who continued on throughout the entirety of the study had significantly lower baseline SAR scores than those who dropped out. Thus, it is possible that participants who self-selected to complete the study were already either engaged with the abortion movement. It is also possible people who are more supportive of restricting abortion (higher SAR scores) may have seen the videos and dropped out because they did not like messages that pointed out negative outcomes to abortion restrictions. We offered compensation to increase motivation so even people who were indifferent or opposed abortion would be more inclined to participate in the study. Future research should assess efficacy of these video interventions with people randomly selected from the Arkansan population.

As with limitations of media interventions, it is possible participants did not watch or pay attention to the whole video even though the survey settings made it so they could not leave the page until the entirety of the video had played. Also, there was a risk that people could have looked up answers to the knowledge questions, as it was administered online, or accuracy scores could have been partially a function of random guessing. However, a very small amount of people reported seeking related media in the two weeks between pre-test and follow-up and there were no differences in outcome scores between those who did and did not report seeking out related media. We cannot infer causality from the effect of the videos. This was an exploratory study with a potential to have implications for future research and intervention work. However, effect sizes were small and implications should be approached with caution.

Finally, we did not ask participants who reported abortion experience if they had personal experience with any legislative restrictions. Future research should address this directly to assess if they were aware of restrictions based on personal experience. Even more, we did not specifically ask if participants believed each restriction was helpful or harmful to women. In order to glean the reasoning behind their support, future research should address this gap.

Conclusion

Overall, the empathy-based media intervention increased participants' knowledge and decreased support for abortion restrictions across the study. A personal testimonial in addition to an information portion significantly changed knowledge over time but did not affect support for restrictions. To increase knowledge of abortion restrictions, it seems there is the potential for success with a video intervention including a credible news source followed by a personal testimonial. Future educational initiatives could use this model.

Targeting support for restrictions, though, may require a different strategy. Endorsement of individual abortion restrictions remained moderately high in the sample, potentially because people lack the understanding of the magnitude of how these restrictions impact women in Arkansas, fully appreciate the implications of each restriction on own's own, or actually want abortion to be further restricted. As these restrictions do not actually help women or protect their autonomy and instead make it more difficult to receive abortion care, it is important for people to understand that supporting restrictions is contradictory to supporting access. Future interventions should work to de-mystify abortion regulations so that people who prioritize reproductive choice understand that these restrictions are unnecessary. In order to understand the contradictory nature of supporting restrictions and supporting access, one has to be aware of what restrictions are in place, the structural factors that contribute to their occurrence, and the outcomes that take place as a result.

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Appendices

Table 4.1

Participant Demographics (N = 369)

Characteristic	N (%)	Characteristic	N (%)
Sex		Sexual Orientation	
Male	104 (28.2)	Heterosexual	329 (89.2)
Female	264 (71.5)	Gay/Lesbian	14 (3.8)
Race		Bisexual	20 (5.4)
White or Caucasian	312 (84.6)	Queer	6 (1.6)
Black or African American	24 (6.5)	Education Level	
Latino/a	12 (3.3)	High school graduate/GED	39 (10.6)
Asian or Asian American	4 (1.1)	Some college/associate degree	104 (28.2)
Bi- or Multi- racial	8 (2.2)	College degree	183 (49.6)
Income Level		Graduate degree	41 (11.1)
Low	23 (6.2)	Political Party	
Lower-Middle	102 (27.6)	Republican	120 (32.5)
Middle	126 (34.1)	Democrat	139 (37.7)
Upper-Middle	57 (15.4)	Libertarian	58 (15.7)
High	61 (16.5)	None	39 (10.6)
Relationship Status		Abortion Identity	
Married	218 (59.1)	“Pro-Life”	66 (17.9)
In a relationship	68 (18.4)	“Pro-Choice”	269 (72.9)
Single and not dating	43 (11.7)	Neither	13 (3.5)
Single and dating	28 (7.8)	Both	18 (4.9)
Abortion Experience (self and/or others)		Sexual Assault Experience (self and/or others)	
Yes	275 (74.5)	Yes	306 (82.9)
No	65 (17.6)	No	47 (12.7)
Not Sure	29 (7.9)	Not Sure	16 (4.3)

Table 4.2

Chi-Square Results for Demographic Characteristics and Video Condition (N=369)

	Control 28.7% <i>n</i> = 106		Intervention 71.2% <i>n</i> = 263		χ^2	Cramer's <i>V</i>
	<i>n</i>	%	<i>n</i>	%		
Sex					1.01	.052
Male	33	31.7	71	68.3		
Female	73	27.7	191	72.3		
Abortion Experience					3.43	.096
Yes	86	31.3	189	68.7		
No	14	21.5	51	78.5		
Not Sure	6	20.7	23	79.3		
Abortion Knowledge Level					1.83	.070
Low	19	34.5	36	65.5		
Medium	70	26.7	192	73.3		
High	17	32.7	35	67.3		
Race					11.44**	.176
White	79	25.3	233	74.7		
Non-White	27	47.4	30	52.6		

Table 4.2 (Cont.)

	Control 28.7% <i>n</i> = 106		Intervention 71.2% <i>n</i> = 263		χ^2	Cramer's <i>V</i>
	<i>n</i>	%	<i>n</i>	%		
Income					11.94**	.180
Low	25	20.0	100	80.0		
Medium	34	27.0	92	73.0		
High	47	39.8	71	60.2		
Education					22.35***	.246
HS or less	21	51.2	20	48.8		
Some College	39	37.5	65	62.5		
College degree	35	19.1	148	80.9		
Graduate degree	11	26.8	30	73.2		
Abortion Identity					19.04***	.227
“Pro-Life”	33	50.0	33	50.0		
“Pro-Choice”	62	23.0	207	77.0		
Other	11	32.4	23	67.6		

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

Table 4.3

Descriptive Statistics and Repeated-Measures ANOVAs for KAR scores and SAR scores Examining by Intervention Across Three Time Points

Measure	Control <i>n</i> = 106		Intervention <i>n</i> = 263		Time	Treatment	Time×Treatment
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (η^2)	<i>F</i> (η^2)	<i>F</i> (η^2)
^a KAR					151.94*** (.45)	25.96*** (.07)	.956*** (.04)
Pre-test	9.47	2.07	9.76	1.61			
Post-test	11.57	2.81	12.62	2.21			
Follow-up	10.25	2.42	11.60	1.57			
^b SAR					27.12** (.13)	1.10 (.003)	2.93 (.02)
Pre-test	61.13	18.70	60.11	19.31			
Post-test	58.14	21.57	55.72	21.38			
Follow-up	60.25	21.36	56.44	21.59			

Note. ^aKAR = Knowledge of Abortion Restrictions (range of 0-18 with high scores indicating high knowledge); ^bSAR = Support for Abortion Restrictions (range of 18-90 with high scores indicating more support for restrictions)

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

Table 4.4

Knowledge of the Main Types of Abortion Restrictions in the U.S. at Pre-test, Post-test, and Follow-up

Restriction	Correctly identified whether it was a law in Arkansas at	Correctly identified whether it was a law in Arkansas at	Correctly identified whether it was a law in Arkansas at
	Pre-test	Post-test	Follow-up
<u>Applies to Arkansas</u>	<u>N (%)</u>	<u>N (%)</u>	<u>N (%)</u>
Minors must get a parent's permission before they can get an abortion	325 (88.1)	361 (97.8)	330 (89.4)
For women having an abortion at 20 weeks of pregnancy or later, doctors have to counsel that that a fetus can feel pain	279 (75.6)	311 (84.3)	290 (78.6)
A woman must wait 48 hours after required counseling before the abortion can be performed.	221 (59.9)	325 (88.1)	302 (81.8)
Medicaid (insurance for people who are low-income) can <i>only</i> cover abortions in cases of the rape and incest or if the woman's life is in danger	265 (71.8)	322 (87.3)	308 (83.5)
Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)	317 (85.9)	332 (90.0)	339 (91.9)
Doctors may not prescribe the abortion pill through <i>telemedicine</i> (e.g., online video session) for people who live far away	246 (66.7)	255 (69.1)	245 (66.4)
Before an abortion, doctors must tell women that it is possible for the abortion pill to be reversed	214 (58.0)	308 (83.5)	296 (80.2)
A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is in danger	78 (21.1)	341 (92.4)	321 (87.0)
A woman cannot get a "Partial-birth" abortion	250 (67.8)	256 (69.4)	218 (59.1)
A woman cannot get a dilation and extraction abortion which is often performed after the 20 th week of pregnancy	265 (71.8)	321 (87.0)	307 (83.2)

Table 4.4 (Cont.)

Restriction	Correctly identified whether it was a law in Arkansas at	Correctly identified whether it was a law in Arkansas at	Correctly identified whether it was a law in Arkansas at
	Pre-test	Post-test	Follow-up
	<u>N (%)</u>	<u>N (%)</u>	<u>N (%)</u>
<u>Does not apply to Arkansas</u>			
Minors must tell a parent before they can get an abortion but they don't need permission.	251 (68.0)	278 (75.3)	251 (68.0)
Before an abortion, doctors have to counsel that there may be a link between breast cancer and abortion	94 (25.5)	69 (18.7)	57 (15.4)
Before an abortion, doctors must tell women that the abortion can cause negative psychological effects	80 (21.7)	94 (25.5)	65 (17.6)
A woman must wait 24 hours after required counseling before the abortion can be performed.	167 (45.3)	292 (79.1)	266 (72.1)
A woman must wait 72 hours after required counseling before the abortion can be performed.	238 (64.5)	310 (84.0)	284 (77.0)
A woman must get an ultrasound (a scan to produce a picture of the pregnancy) before an abortion	88 (23.8)	147 (39.8)	93 (25.2)
Private health insurance companies (e.g., Blue Cross Blue Shield, United Healthcare) can require people to pay more or buy special insurance to cover abortion	246 (66.7)	117 (31.7)	86 (23.3)
Facilities that provide abortions have to adhere to <i>ambulatory surgical standards</i> (e.g., hallways have to be a certain width, requires extra nursing staff, has to be within a certain distance to a hospital)	75 (20.3)	106 (28.7)	80 (21.7)

Table 4.5

Support for the Main Types of Abortion Restrictions in the U.S. at Pre-test and Follow-up

Restriction	Agreed it should be a law in Arkansas at Pre-test		Disagreed it should be a law in Arkansas at Pre-test		Agreed it should be a law in Arkansas at Follow-up		Disagreed it should be a law in Arkansas at Follow-up	
	N (%)	Neutral at Pre-test	N (%)	Neutral at Pre-test	N (%)	Neutral at Follow-up	N (%)	Neutral at Follow-up
Minors must get a parent's permission before they can get an abortion.	211 (57.2)	54 (14.6)	104 (28.2)	221 (60.1)	32 (8.7)	115 (31.3)		
For women having an abortion at 20 weeks of pregnancy or later, doctors have to counsel that that a fetus can feel pain	211 (57.2)	50 (13.6)	108 (29.3)	210 (56.9)	31 (8.4)	128 (34.7)		
A woman must wait 48 hours after required counseling before the abortion can be performed.	194 (52.6)	53 (14.4)	122 (33.1)	187 (50.7)	35 (9.5)	147 (39.8)		
Medicaid (insurance for people who are low-income) can <i>only</i> cover abortions in cases of the rape and incest or if the woman's life is in danger	205 (55.6)	36 (9.8)	128 (34.7)	220 (59.8)	25 (6.8)	123 (33.4)		
Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)	283 (76.7)	42 (11.4)	44 (11.9)	243 (66.2)	48 (13.1)	76 (20.7)		
Doctors may not prescribe the abortion pill through <i>telemedicine</i> (e.g., online video session) for people who live far away	180 (48.8)	53 (14.4)	136 (36.9)	143 (38.8)	46 (12.5)	180 (48.8)		
Before an abortion, doctors must tell women that it is possible for the abortion pill to be reversed	229 (62.1)	77 (20.9)	63 (17.1)	219 (59.5)	39 (10.6)	110 (29.9)		

Table 4.5 (Cont.)

A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is in danger	218 (59.1)	41 (11.1)	110 (29.8)	208 (56.4)	51 (13.8)	110 (29.8)
A woman cannot get a “Partial-birth” abortion	192 (52.2)	78 (21.2)	98 (26.6)	177 (48.1)	63 (17.1)	128 (34.8)
A woman cannot get a dilation and extraction abortion which is often performed after the 20 th week of pregnancy	211 (57.2)	55 (14.9)	103 (27.9)	207 (56.3)	45 (12.2)	116 (31.5)
Minors must tell a parent before they can get an abortion but they don’t need permission.	148 (40.1)	56 (15.2)	165 (44.7)	116 (31.4)	55 (14.9)	198 (53.7)
Before an abortion, doctors have to counsel that there may be a link between breast cancer and abortion	233 (63.1)	58 (15.7)	78 (21.1)	201 (54.6)	47 (12.8)	120 (32.6)
Before an abortion, doctors must tell women that the abortion can cause negative psychological effects	273 (74.0)	43 (11.7)	53 (14.4)	244 (66.3)	36 (9.8)	88 (23.9)
A woman must wait 24 hours after required counseling before the abortion can be performed.	186 (50.4)	60 (16.3)	123 (33.3)	166 (45.0)	39 (10.6)	164 (44.4)
A woman must wait 72 hours after required counseling before the abortion can be performed.	162 (43.9)	33 (8.9)	174 (47.2)	146 (39.6)	28 (7.6)	195 (52.8)
A woman must get an ultrasound (a scan to produce a picture of the pregnancy) before an abortion	210 (56.9)	36 (9.8)	123 (33.3)	213 (57.7)	24 (6.5)	132 (35.8)
Private health insurance companies (e.g., Blue Cross Blue Shield, United Healthcare) can require people to pay more or buy special insurance to cover abortion	178 (48.2)	55 (14.9)	136 (36.9)	187 (50.8)	44 (12.0)	137 (37.2)
Facilities that provide abortions have to adhere to <i>ambulatory surgical standards</i> (e.g., hallways have to be a certain width, requires extra nursing staff, has to be within a certain distance to a hospital)	268 (72.6)	45 (12.2)	56 (15.2)	247 (66.9)	51 (13.8)	71 (19.2)

CHAPTER 5: MANUSCRIPT 2

Do race and pregnancy situation affect empathy for women who seek abortions in Arkansas?: A randomized-controlled video intervention

Abstract

CONTEXT: Despite the safety and prevalence of U.S. abortions, people who seek them encounter barriers from two main sources: legislation and stigmatization. Empathy induction may reduce these barriers, especially in highly restrictive states like Arkansas. This study examines factors that contribute to empathy induction among Arkansans who watched a video intervention.

METHODS: A sample of Arkansas residents ($N = 369$) completed an online survey comprising a pre-test, video intervention, post-test, and two-week follow-up. There were five video conditions, varying by actor's race and pregnancy narrative. The surveys assessed baseline Empathic Concern and post-video feelings of empathy. Chi-squared analyses were used to assess differences in six empathy characteristic scores (e.g., moved, tender) by video condition. Hierarchical regressions examined factors (e.g., video condition) contributing to post-video empathy sum scores.

RESULTS: Participants who watched a testimonial where the woman was raped had higher individual empathetic feeling scores. Post-test empathy sum scores were a function of respondents' sex, experience with abortion and sexual assault, baseline Empathic Concern, and video condition. The testimonial depicting a Black woman who was raped induced the most empathy at post-test. In the two-week follow-up, only personal experiences with abortion and sexual assault, sex, and baseline Empathic Concern predicted empathy sum scores.

CONCLUSIONS: Prior personal experiences and internalization of abortion stigma can affect empathy induction. People were more empathetic for the woman who experiences rape rather than consensual sex. The hierarchy of abortion narratives may influence perceptions of abortion seekers. Future interventions to shift attitudes toward abortion seekers should incorporate personal experiences and a variety of abortion narratives to normalize abortion experiences and reduce stigma.

Key words: abortion, empathy, video intervention, Arkansas

Introduction

Despite its high prevalence and low risk, abortion remains a contentious topic in the U.S. (Dreweke, 2017; Guttmacher Institute, 2017a; Guttmacher Institute, 2017f; Jones & Jerman, 2017b). People who seek abortions face numerous barriers stemming from two main sources: restrictive legislation and stigma. Midwestern and Southern states, such as Arkansas, have particularly high rates of these laws restriction abortion (Nash et al., 2017). Stigmatization is another source of impediment. People often conceptualize abortion seekers as either worthy or unworthy patients, depending on circumstances, and perpetuate these conceptualizations in interactions with others. This stigma can affect abortion seekers' decisions or make their reproductive journey more difficult (e.g., Norris et al., 2011).

Together, state laws and stigmatization delay abortions, making them more difficult to get, expensive, and riskier than abortions obtained earlier in pregnancy (Bitler & Zavodny, 2001; Jones & Weitz, 2009). Those who are denied abortion access suffer many negative outcomes compared with those who obtain a sought after abortion. These outcomes include increased depression and anxiety, decreased career or education advancement, and increased poverty (Foster et al., 2015; Foster et al., 2018; Gipson, Koenig, & Hindin, 2008; Upadhyay et al., 2015). As such, focusing on abolishing these barriers is a way to reduce negative health outcomes for people who seek reproductive care.

A possible mechanism to reduce support for legislative barriers and abortion stigma is to create empathy for those who seek abortions. Indeed, empathy induction has been a successful tactic in shifting people's attitudes toward stigmatized populations (e.g., Batson et al., 1997; Galinsky & Moskowitz, 2000; Nook et al., 2016; Wang et al., 2014). Video-based interventions have been effective in shifting attitudes towards health behaviors as well (e.g., Blas, et al., 2010;

Braverman, 2008; Roberto et al., 2000). Therefore, the current study examines the efficacy of an empathy-based video intervention with residents of Arkansas, a state categorized as hostile towards reproductive health access (Nash et al., 2017). We also examined contributing factors toward feelings of empathy (i.e., sex, personal experiences, baseline Empathic Concern) for Arkansans who seek abortions.

Barriers to Abortion Access

Arkansas is among the top three states in the U.S. with the most legislative abortion restrictions passed between 2011 and 2015 (Guttmacher Institute, 2016b). Additionally, the Arkansas state legislature introduced more anti-abortion bills than any other state during the 2017 legislative session (Center for Reproductive Rights, 2018). It is considered an “extremely hostile” state (Guttmacher Institute, 2017k; Nash et al., 2017) with barriers stemming from two sources: legislative restrictions and stigmatization.

Legislative barriers. In recent years, state legislatures have introduced myriad laws restricting access to reproductive health services, including abortion and contraception; the Center for Reproductive Rights (2018) estimates that 2,556 bills of this nature have been introduced in the U.S. since 2011, and 370 have been made law. The ten most common types of abortion restrictions include: 1) mandating parental involvement, 2) requiring pre-abortion counseling, 3) mandating waiting periods, 4) mandating ultrasounds, 5) prohibiting coverage from federal funding, 6) inhibiting coverage from private funding, 7) regulating medication abortion, 8) micromanaging abortion facilities, 9) restricting abortions based on viability, and 10) preparing for the overturn of *Roe v. Wade* (Nash et al., 2017). At data collection for this study, Arkansas had laws in 8 of the 10 major categories (Guttmacher Institute, 2017k; Nash et al., 2017).

As a result, Arkansas only has three facilities in the state that provide abortion services (Cartwright, Karunaratne, Barr-Walker, Johns, & Upadhyay, 2018) for approximately 600,000 women of reproductive age (i.e., 15-44; March of Dimes, 2019). Because these clinics are located in two cities across the entire state, women's ability to seek and access an abortion is severely limited. Additionally, with only three clinics total in the state, when women go to one of these facilities, their private choices become public. If abortion was more accessible in Arkansas (e.g., health professionals were not hindered in providing abortions in hospitals and other healthcare settings), women would be afforded more privacy in making these reproductive choices.

Stigmatization. Many studies have examined sources and outcomes of stigma that abortion seekers face (e.g., Kimport, Foster, & Weitz, 2011; Kimport, Weitz, & Freedman, 2016; Norris et al., 2011). These studies often collect stratified data with representation from people in the South and Midwest. However, if there are Arkansans in these samples, they are combined with other Southerners or Midwesterners. Arkansans do not have the same experiences as other Southerners or Midwesterners. Lawmakers in Arkansas enacted more anti-abortion laws than any other state in 2017 (Center for Reproductive Rights, 2018), but convenience samples of Arkansans suggest the majority support abortion legality; it is unknown to what extent Arkansans understand the practical impact that abortion restriction have on individual women (Jozkowski, Crawford, & Hunt, 2018; Parry, 2017). To study how Arkansans feel about abortion, additional research is needed.

There is limited research specifically examining Arkansans' internalized stigmatization toward women who seek abortions. Instead, we can examine national data to assess sources of stigmatization. Often, attitudes toward abortion are influenced by a variety of internal biases;

there are three specific biases that are consistently related to abortion attitudes: 1) beliefs about women and their role in motherhood, 2) beliefs about race, and 3) perceived pregnancy responsibility (e.g., Hans & Kimberly, 2014; Kumar, 2013; Kumar et al., 2009; Norris et al., 2011).

Beliefs about women. Most people who seek abortions face prejudices related to the general societal pressures of women. Kumar and colleagues (2009) posit that women who seek abortions are marked as “inferior” (p. 628) by violating the three ideals of womanhood/femininity: women must have sex only for procreation, women must aspire to become mothers, and women must act on their instinct to nurture the vulnerable. Likewise, Ellison (2003) argues that stigmatizing women who have abortions is a form of “structural violence” (p. 323) and therefore perpetuates that there are “good” and “worthy” women (e.g., married women who become pregnant and have babies) and socially deviant women (e.g., those who are not married, those who end their pregnancies).

Beliefs about race. While all women experience gender pressure, women of color face even greater stigma compared with White women. Kumar (2013) points out that “socially excluded” women (e.g., women of color) already experience stigmatization and discrimination without seeking an abortion. Therefore, scholars should be careful not to lump every inequality in as “abortion stigma.” There are women who are already at a social disadvantage when they “enter the abortion landscape” (Kumar, 2013, p. e330) and their obstacles are exacerbated as they navigate an abortion experience. For instance, young women of color experience prejudice and discrimination as a result of racism. Paradoxically, these women, who experience the most barriers to access, have the highest rates of abortion (Guttmacher Institute, 2017a; Jones & Jerman, 2017b; Jones & Kavanaugh, 2011).

The Hyde Amendment is an example of a barrier that heavily affects women of color. This law prohibits federal funding from covering abortion care, which overwhelmingly affects low-income women of color. Women of color are more likely to be use Medicaid due to socioeconomic inequality stemming from racism (i.e., 30% of Black women and 24% of Hispanic women aged 15–44 are enrolled in Medicaid, compared with 14% of White women; Boonstra, 2016; Frohwirth, 2014). Also, because of racial prejudice, people perceive that the state has the right and responsibility to intervene in the reproductive decisions of women of color on behalf of their fetuses and children (Harrison, 2016). For example, pregnant women of color are more likely to be policed by hospitals for engaging in behaviors that are detrimental to the fetus (e.g., drug use) even though pregnant White women are just as likely to engage in the same behaviors.

Perceived pregnancy responsibility. Another internal bias that contributes to stigmatization is the circumstances under which a woman became pregnant and consequently their perceived responsibility for the pregnancy. Overwhelmingly, the U.S. public supports abortion under at least some circumstances (Smith & Son, 2013), yet, many people harbor conflicting attitudes. People conceptualize abortion seekers as worthy or unworthy based on women’s characteristics or circumstances (Hunt, Marcantonio, Jozkowski, & Crawford, forthcoming; Jozkowski, Crawford, & Hunt, 2018; Smith & Son, 2013). For instance, people conceptualize a worthy abortion seeker when there is a “good” reason and an unworthy abortion seeker when there is a “bad” reason. Rape is a pregnancy circumstance often supported by the public as an “acceptable” or understandable reason for abortion (Mikolajczak & Bilewicz, 2015; Smith & Son, 2013). A woman who is pregnant as a result of consensual sex, a “bad” reason, will likely be judged more harshly for seeking an abortion than a woman who was raped. Likely,

people will assume the woman who became pregnant as a result of consensual sex had some control over her risk of pregnancy compared with someone who may not have had a choice (Hans & Kimberly, 2014).

In this study, we aimed to examine the impact of restrictions and factors that contribute to stigmatization of women (e.g., race, perceived pregnancy responsibility) as they relate to empathy induction for Arkansan women who seek abortions.

Empathy

Those who have sought or obtained an abortion report experiencing stigma and discrimination from their partners, family, friends, and the larger society (Norris et al., 2011). This stigma can result from a lack of understanding, or empathy, about women's decisions to obtain an abortion. Empathy is the result of perspective-taking that "occur[s] when people can seemingly understand the underlying reasons for the behavior of someone other than themselves" (Plumm & Terrance, 2009, p. 191). As such, targeting empathy may increase people's understanding of abortion seekers' circumstances. In turn, their attitudes about people who seek abortions may shift.

There are two primary types of empathy: trait and state (Batson, Turk, Shaw, & Klein, 1995; Haegerich & Bottoms, 2000; Plumm & Terrance, 2009). Trait empathy results from an individual's similarity with the population in question (e.g., personal characteristics such as gender and race), whereas state empathy is a result of an individual's ability to position take with another person. It is difficult to manipulate or target trait empathy as it requires sharing similar characteristics with another person; however, researchers can increase people's ability to experience state empathy.

A person's life experiences can facilitate higher levels of state empathy. For example, facing discrimination or knowing someone who has been raped can lead to an increased chance of shifted attitudes for populations in need of empathy (Batson et al., 1997; Galinsky & Moskowitz, 2000; Glynn & Sen, 2015; Moyer & Haire, 2015; Wang, Tai, Ku, & Galinsky, 2014; Wiener, Felman Wiener, & Grisso, 1989). Literature indicates women are more likely than men to have higher empathy (Eisenberg & Lennon, 1983; Hoffman, 1977). Taken together, we hypothesized women who have had a personal abortion experience seem to be most likely feel empathy for abortion seekers.

Researchers have designed interventions using empathy induction techniques to change people's attitudes toward stigmatized populations. For instance, interventions have been conducted to increase empathy for homeless individuals (Batson et al., 1997; Nook et al., 2016; Wang et al., 2014), individuals who have committed homicide (Batson et al., 1997; Plumm & Terrance, 2009), and individuals with illness or disability (Batson et al., 1997; Lor et al., 2015). These interventions increased people's empathy toward these vulnerable populations and successfully shifted people's attitudes toward these groups. Therefore, empathy appears to be an underlying cognitive construct that can influence attitudes.

There is limited research using empathy as a tool to adjust people's attitudes toward women who seek abortions (Norris et al., 2011). The few empathy interventions focused on abortion have targeted either health professionals (e.g., Pace et al., 2008; Turner and colleagues, 2008) or specifically aimed for conflict resolution among "pro-life" vs. "pro-choice" populations (LeBaron & Carstaphen, 1997), but not the individuals who experience abortion.

Strategies to Induce Empathy

To induce empathy, experiments have had success with testimonials, or stories of personal experiences told by members of the group in question. In these experiments, participants have either watched videos, listened to audio tracks, or read these stories. Then they were instructed to think about how the other person might be feeling to elicit an empathetic response (Davis, 1996; Haegerich & Bottoms, 2000; Plumm & Terrance, 2009). Specifically, audio- or video-based testimonials appear to have resulted in longer lasting attitude changes than written testimonials or education initiatives alone (Batson et al., 1997; Blas, et al., 2010; Braverman, 2008; Parker et al., 1996; Roberto et al., 2000). Further, some interventions that involved interacting with and hearing the narratives of people who obtain and work in abortion care generated successful attitude change (LeBaron & Carstaphen, 1997; Pace et al., 2008).

The Current Study

The goal of this study was to examine the effectiveness of a video-based intervention that used empathy induction as a tool to adjust people's views on Arkansas women who seek abortions. All participants received the same educational information about abortion restrictions in Arkansas. For participants randomized to the intervention arm, we tested two variables across four conditions in the intervention—race and pregnancy circumstance. For race, participants in the intervention condition either viewed a Black or White woman discussing her difficulties obtaining an abortion in Arkansas. For pregnancy circumstance, participants in the intervention condition heard one of two stories: the woman became pregnant through consensual sex or as a result of a rape. We aimed to see if these two intervention variables affected feeling the six empathy characteristics (e.g., sympathetic, moved, tender; Batson et al., 1997). Then we aimed

to test which factors, including testimonial version, predicted empathy sum scores for women who seek abortions in Arkansas.

RQ1. First, we examined if people felt the six empathy characteristics differently depending on the race of the woman in the video. We hypothesized that people who viewed the Black woman's testimonials would have lower scores on the six empathy characteristics than those who viewed the White woman given internal racial biases against women of color.

RQ2. Second, we examined if people felt the six empathy characteristics differently based on perceived pregnancy responsibility. We hypothesized that participants who viewed the testimonial where the woman became pregnant as a result of rape would have higher scores on the six empathy characteristics than participants who heard the woman became pregnant as a result of consensual sex.

RQ3. Last, we examined if other personal experiences/traits contributed to empathy sum scores. Particularly, we aimed to see whether watching a certain testimonial would affect empathy sum scores above and beyond personal experiences/traits. The variables we evaluated were participants' sex, previous experience with abortion, previous experience with sexual assault, baseline Empathic Concern (how naturally empathetic one is), social desirability scores (to what degree participants feel pressure to act according to what is socially acceptable), and assigned video condition. Specifically, we hypothesized that people who 1) are female, 2) have personal experiences with abortion, 3) have personal experiences with sexual assault, 4) have higher level of baseline Empathic Concern, 5) people with high social desirability scores, and 6) viewed the video with a White woman who was raped would have the highest empathy sum

scores. We examined participants' race in another model but it was not significant and was not included in the final model.

Methods

Participants

A sample of Arkansas residents ($N = 369$) completed an online survey that entailed a pre-test, intervention, post-test and two-week follow-up. We recruited participants through targeted social media advertising in Arkansas (e.g., Arkansas specific Reddit and Craigslist pages, Facebook), word of mouth, email, and listservs. Eligibility criteria included currently living in Arkansas, being at least 18 years old, and being a native English speaker or attending school where English was the primary language from K-12. The minimum number of participants required was determined by an a priori power analysis (G*Power: Faul et al., 2007) with power ($1 - \beta$) set at .80, $\alpha = .05$, two-tailed, and a medium effect size of .25 (Cohen, 1977, 1988). All group sizes used in analyses exceeded this minimum ($n = 34$ per group). Twenty-four hundred people opened the introductory page and 556 qualified for the study.

After data were collected, we removed individuals for failing reading checks, incomplete surveys, and failure to complete all three points of data collection (attrition rate of 33.6%); See Figure 5.1 for attrition rates and final sample size in each condition. The final analytical sample included 369 participants who completed all three waves of data collection ($N = 263$ in intervention conditions and $N = 106$ in control condition).

The majority of the sample identified as female, White, heterosexual, and “pro-choice.” The mean age was 32.07 ($SD = 9.44$) and, on average, participants had lived in Arkansas for 21.36 years ($SD = 12.14$). The majority of the sample reported having a personal experience with abortion and sexual assault. In other words, either they or someone they knew had had an

abortion and/or had experienced a sexual assault before. Frequencies of demographic data are reported in Table 5.1.

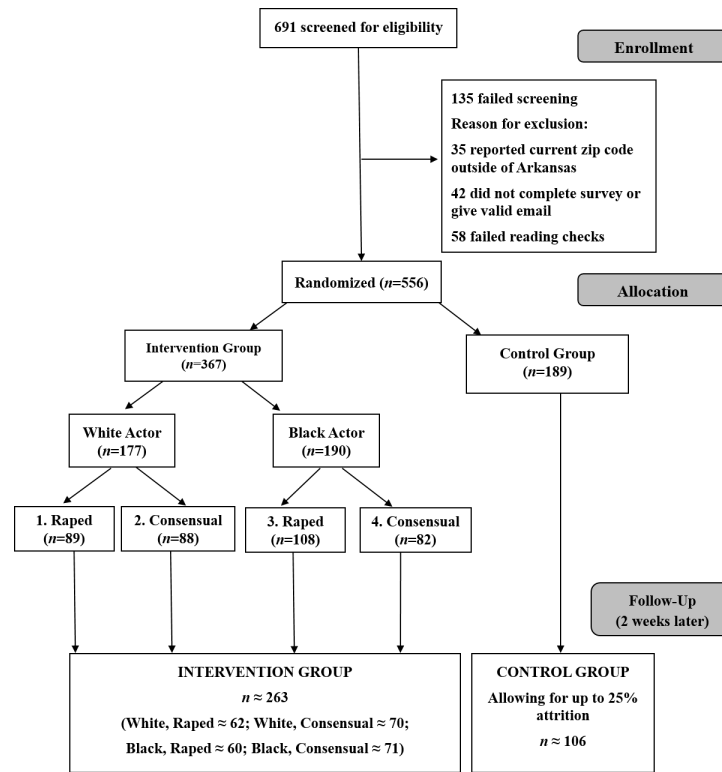


Figure 5.1. Sample size and survey flow.

Procedures

The study followed a randomized-controlled pre-test, post-test, follow-up (PPF) design. After completing the pre-test, participants were randomly triaged into watching one of five video clips. All clips began with the same informational portion about current legislative restrictions on abortion in Arkansas. Participants were then either assigned to the control condition (i.e., moved into post-test questionnaire) or one of the four testimonials. A testimonial depicted a woman discussing the difficulty she had in seeking an abortion in Arkansas because of state restrictions. Following the testimonial, participants in the intervention conditions received the post-test. In closing, we asked all participants to provide their email to be sent the two-week follow-up survey and financial compensation (i.e., one \$10 e-gift card). Two weeks later, participants received the

follow-up survey via email to test for rebound effects (Aron, Aron, & Smollan, 1992; Johansson-Love & Geer, 2003). Participants received an additional \$10 e-gift card as incentive for participating in the follow-up survey. The Institutional Review Board at the institution of data collection approved all procedures.

Intervention Videos

Content. Several media persuasion strategies guided the content development of the videos (e.g., casting, script development, visual aids). For example, to establish credibility of the woman giving the testimonial as a source of information (Petty & Priester, 1994), the news anchor introduces her as someone “*who is here to tell us a personal story about her experience with these Arkansas laws.*” By tying her to the state where participants currently live, the audience is more likely to pay attention to the information (Devereux, 2007; Golding & Elliott, 1979; Wahl-Jorgensen & Hanitzsch, 2009). A team of five experts in media communication, public health, sociology, and abortion research reviewed the script for clarity and wording. The two video portions are briefly described below. See the Appendix A for the full script.

Informational portion. The informational portion aimed to increase awareness of the myriad abortion restrictions in Arkansas via a news story. All participants watched this clip. The news anchor introduces herself and briefly provides context about the safety, legality, and types of abortion. Then she describes the major legislative restrictions on abortion in Arkansas, each with an accompanying reiterative graphic. The news anchor ends the clip specifying how these restrictions have diminished access to abortion services.

Testimonial portion. There were four intervention groups, each watching a different version of the testimonial. All four testimonials were similar in length and wording (Ryffel &

Wirth, 2016). Participants either watched a Black woman or a White woman give one of two different pregnancy scenarios: consensual sex or rape. In constructing the testimonials, we aimed to maximize the empathy people would feel for the character. In the consensual version, the woman, “Mia,” describes her experience becoming unexpectedly pregnant and seeking an abortion. She states that she did not know the person by whom she became pregnant and “didn’t tell anyone about it for a long time.” She outlines the time it took for her to realize she was pregnant and details the restrictions that made obtaining an abortion in Arkansas more difficult (e.g., lack of insurance coverage, necessitated travel and waiting period increasing costs). She describes her economic troubles such as “living paycheck to paycheck,” struggling to afford rent and groceries, and having to use all of the money in her bank account to pay for the abortion. She divulges that she had to ask a friend for money for the bus ride to the clinic 3 hours away and had to sleep in the bus station for two nights during the 48-hour waiting period. She concludes with the statement “I don’t regret the abortion. I felt relieved. It wasn’t the right time.”

In the rape testimonial, the woman, “Mia” begins saying “Last year, I was raped. I was coming out of work and someone attacked me the parking lot. I didn’t know the guy and I didn’t tell anyone about it for a long time.” In the same words as the consensual version, she outlines the time it took for her to realize she was pregnant. She also details the same restrictions and economic troubles that made it more difficult for her to seek an abortion. In this version, she says “I also knew I definitely did not want to have the baby of the person who raped me” and “My insurance wouldn’t cover me because I didn’t report the rape. I didn’t want people to know.” She details the ordeal of getting to the clinic and having to sleep in the bus station, just like the other version. She concludes with a statement of certainty: “I don’t regret the abortion. I felt relieved. I just wanted to put the rape behind me.”

Measures

First, we pilot tested the pre-test, post-test, and follow-up instruments with a convenience sample of graduate and undergraduate researchers ($n = 14$) to assess for clarity, readability, and length. The pre-test measures of interest in this study included: screener questions to assess eligibility, demographic questions (e.g., sex, experience with abortion and sexual assault), and one subscale of the Interpersonal Reactivity Index (IRI)-- Empathic Concern (Davis, 1980). The post-test had an assessment of empathy feelings (Batson, 1991; Drwecki et al., 2011) to evaluate immediate effects after the videos (i.e., control (0), White woman, rape testimonial (1), White woman, consensual sex (2), Black woman, rape (3), Black woman, consensual sex (4)). Participants took the feelings of empathy assessment again in the two-week follow-up assessment in addition to a source-credibility scale (Ohanian, 1990) assessing for confounding factors.

Feelings of empathy. Participants indicated to what extent they experienced six empathy characteristics (Batson, 1991; Drwecki et al., 2011) after viewing their assigned video and again at the two-week follow-up. At post-test, they were asked “After hearing the news story, to what extent did you experience feeling...” At follow-up, instructions included, “A few weeks ago, you watched a news story about abortion laws in Arkansas. When thinking about this video clip, what are your current feelings?” The six characteristics consisted of *tender*, *softhearted*, *warm*, *compassionate*, *moved*, and *sympathetic* on a 7-point Likert scale from 1 (not at all) to 7 (very much). Scores were aggregated to form a total score (ranging 6 to 42) in addition to analyzing each feeling score separately (ranging 1 to 7). The empathy characteristics were found to be reliable at post-test and follow-up (6 items; $\alpha = .916$, $\alpha = .914$ respectively). In analyzing the scores of the individual characteristics, we collapsed the seven point Likert scale (1 = not all to 7

= very much) into three categories: lack of [feeling] (scores of 1, 2, and 3), neutral on [feeling] (scores of 4), and positive report of [feeling] (scores of 5, 6, and 7).

Sex. In the pre-test, participants were asked one question about their sex. They could have responded with male (1), female (2), or other (3) and specified their answer.

Experience with abortion and sexual assault. In the pre-test, participants were asked to report personal experiences with abortion and sexual assault. First, they were asked, “*Have you or anyone you know had an abortion?*” and “*Have you or anyone you know experienced sexual assault?*” For both questions, participants could have answered yes (1), no (2), or I’m not sure (3).

Interpersonal Reactivity Index (IRI; Davis, 1980). The IRI is a 28-item measure consisting of four 7-item subscales, “each tapping some aspect of the global concept of empathy” (Davis, 1983, p. 113). The current study used one subscale related to the study aims: Empathic Concern which “assesses ‘other-oriented’ feelings of sympathy and concern for unfortunate others” (Davis, 1983, p. 114). An example item on the Empathic Concern subscale was “*I often have tender, concerned feelings for people less fortunate than me.*” Each item was rated on a 5-point Likert scale ranging from 1 (does not describe me well) to 5 (describes me very well). Higher scores indicated a higher self-reported tendency to experience empathy. The Empathic Concern scale was found to be reliable (7 items; $\alpha = .789$).

Source-credibility scale (Ohanian, 1990). At the end of the follow-up survey, participants were asked to evaluate the actor(s) in the video they watched. Participants were shown a picture of the actor(s) of their assigned video condition and scored them on a 9-point bipolar scale on three subscales: attractiveness, trustworthiness, and expertise. The scale was 15

items with a total score range of 15 to 135, with lower scores indicating more perceived credibility of the source. The source-credibility scale was found to be reliable (15 items; $\alpha = .957$).

Analyses

All data were downloaded from Qualtrics Survey Software into SPSS 24 for analyses. First, we ran univariate analyses on the pre-test Empathic Concern scores to assess group differences between the five video conditions. As part of assessing for confounding factors, we examined differences in the actors' perceived credibility score with univariate comparisons. We accounted for Type I error by using a Bonferroni correction in all analyses with multiple comparisons ($\alpha = .05/5 = .01$).

RQ1 and RQ2. We examined each of the six empathy characteristics (sympathetic, moved, compassionate, tender, warm, soft-hearted) by the manipulated variables in the testimonials (race and perceived pregnancy responsibility), using chi-squared analyses. For race, we compared White woman's testimonials vs. Black woman's testimonials. For perceived pregnancy responsibility, we compared testimonials in which the woman was raped vs. testimonials in which the woman had consensual sex. Additionally, we performed post-hoc pairwise Fisher's exact tests. We reported Cramér's V as a measure of effect size for all significant chi-square results. A ϕ -value of .10 indicates a small effect size, .30 medium, and .50 large (Kline, 2004).

RQ3. To assess what factors contributed to empathy sum scores toward women who seek abortions, we conducted two hierarchical regressions testing six predictors (i.e., video condition, sex, abortion experience, sexual assault experience, social desirability, and baseline Empathic

Concern)—one at post-test and one at follow-up. Post-hoc pairwise comparisons were conducted to assess significant differences in our factors of interest.

Results

At baseline, participants had a medium to high tendency for Empathic Concern ($M = 25.03$ $SD = 5.20$; range 5-35). Regarding the six feelings of empathy, the mean total score was 31.81 ($SD = 7.59$) at post-test and 30.11 ($SD = 8.32$) at follow-up. The scores ranged from 6 to 42 indicating relatively high feelings of empathy for the woman giving the testimonial. Mean scores of the six empathy characteristics at post-test and follow-up are reported in Table 5.2.

There were no significant differences between groups on Empathic Concern scores at baseline, [$F(4, 364) = 2.312, p = .057$], indicating an effective randomization. As part of assessing for confounding factors, we examined differences in the actors' perceived credibility score. Univariate comparisons indicated no significant differences between the Black actor and White actor in total score, $p = .682$, Attractiveness, $p = .991$, Trustworthiness, $p = .631$, or Expertise, $p = .534$.

Effects of Interventions

RQ1 and RQ2. There were no significant differences in empathy characteristic scores by race at post-test or follow-up. However, at post-test, there were differences on empathy characteristic scores by perceived pregnancy responsibility ($\alpha = .05/3 = .017$). There were no significant differences by video condition for individual Sympathetic scores, Moved scores, Compassionate scores, or Warm scores. There were significant differences for Tender scores, [$X^2(2, N = 263) = 12.19, p = .002$] and Soft-hearted scores, [$X^2(2, N = 263) = 8.11, p = .017$]. See Table 5.3 for chi-square results.

We calculated post hoc pairwise Fisher's exact tests for post-test feelings to identify which video condition was associated with difference empathy measures. Participants who watched a testimonial in which the woman was raped had a positive report (scores of 5, 6, 7) of feeling Tender ($p = .001$) and Soft-hearted ($p = .011$) compared with those who watched a testimonial where the women became pregnant from consensual sex. Participants who watched a consensual testimonial reported feeling neutral (scores of 4) on the Tenderness scale ($p = .026$) compared to those who watched a rape testimonial. Last, participants who watched a consensual testimonial reported feeling a lack of (scores of 1, 2, 3) Tenderness ($p = .022$), and a lack of Soft-heartedness ($p = .016$) compared to those who watched a rape testimonial.

At the two-week follow-up there were no significant differences on empathy characteristic feelings.

RQ3. First, we examined what factors would predict feelings of empathy at post-test and two-week follow-up. We first entered baseline Empathic Concern, social desirability score, and sexual assault experience as our independent variables as controls because of their high correlations with the dependent variable. Then we added experience with abortion, sex, and, last, video condition. Our findings suggest that all of our independent variables, except social desirability, predicted empathy sum scores after watching the video, at post-test, [$F(6, 357) = 15.636, p < .001$]. The model accounted for 20.8% of the variance in empathy sum scores ($R^2 = .208$, adjusted $R^2 = .195$); see Tables 5.4 and 5.5. Post hoc comparisons suggested higher empathy sum scores among those who watched the testimonial of a Black woman who was raped (compared with those who did not watch a testimonial; $p < .001$).

Next, we examined if our factors of interest predicted empathy at the two-week follow-up entering independent variables in the same order. Only four factors were predictive of empathy sum scores: baseline Empathic Concern, sex, sexual assault experience, and abortion experience, [$F(6, 357) = 12.659, p < .001$], accounting for 17.5% of the variance ($R^2 = .175$, adjusted $R^2 = .162$); see Table 5.4 and 5.6.

Discussion

This study aimed to adjust feelings of empathy for women who seek abortions in Arkansas via a randomized-controlled video experiment. Our results suggest that several prior experiences and feelings can affect the empathy induced by the intervention. In examining the empathy characteristic scores (e.g., tender, soft-hearted), there were only differences by perceived pregnancy responsibility; people who watched a rape testimonial reported higher scores on several emotions compared to the consensual testimonial. There were no differences in empathy characteristic scores by race of the video subject. In assessing contributions to the empathy sum scores, only one video condition was related to greater feelings of empathy for the actor; this condition depicted the Black woman who became pregnant by rape. However, these results were only sustained at post-test; there was no impact of video condition on empathy at the two-week follow-up. Interestingly, we found that personally experiencing or knowing someone who experienced sexual assault or abortion increased empathy for our actor at both post-test and follow-up.

Effect of Race on Empathy

There were no differences when we compared scores on each individual emotion (e.g., moved, tender) between those who watched a White woman's testimonial and those who watched a Black woman's testimonial. Generally, people were on the high end in reporting these

feelings (i.e., 5, 6, 7, with 7 being I experienced this feeling “very much”). The lack of differences by race could have been a function of the homogeneity of our sample. Over half of participants had a college degree or higher and reported being liberal or strongly liberal. Research shows that education and liberal opinions are often associated with social tolerance (Kozloski, 2010). It may be that people in our study are more attuned to discrimination and therefore, the woman’s race did not affect individual empathetic emotions for her.

Although there was no effect of race in individual feeling scores, there was one testimonial--the Black woman who was raped--that had a significant effect on total empathy score (i.e., all of the feelings scored together). We hypothesized that individuals would have more empathy for the White actress because of internalized racial bias against Black women. However, the Black woman induced more empathy. If the education and liberal opinions of our sample are associated with higher social tolerance, perhaps feeling more empathy for the Black woman was related to understanding women of color experience marginalization and are afforded less privilege and means than White women in society (e.g., Boonstra, 2016; Jones & Kavanaugh, 2011).

Alternatively, our participants’ empathy for the Black woman who was raped could have manifested from a feeling of supervision or authority. Baker (2015) argues that White Americans favor giving aid to people of color as a function of an “underlying racial paternalism” (p. 93). That is, instead of feeling empathy because the system of reproductive circumstances is stacked against her, people may have felt she needed help because of internalized prejudice. Indeed, some scholars attest that health care professionals intercede for pregnant women of color more than pregnant White women to ensure they are maintaining their pregnancy to certain standards (e.g., testing for drug use; Harrison, 2016). In the case of a pregnant woman of color seeking an

abortion, feeling “moved” or “sympathetic” may stem from thinking her situation--being in poverty, being Black, and being raped--warrants an “acceptable” reason for termination. If this sense of paternalism is a contributor in our sample, educational initiatives may need to address cognitive processes behind abortion attitudes related to underlying racism in addition to shifting empathy.

Effect of Perceived Pregnancy Responsibility on Empathy

As we predicted, people who watched a testimonial with a rape narrative had higher individual empathy scores compared with those who watched a consensual narrative. Rape survivors are typically viewed as less at fault for their pregnancy and worthier of pregnancy termination than those who had consensual sex (Ludlow, 2008; Mikolajczak & Bilewicz, 2015; Smith & Son, 2013). Again, in examining total empathy scores, it was only the Black woman who was raped that induced significantly higher scores. Though there were no differences when looking solely at race, perhaps the combination of the rape scenario and race were what created the more empathetic combination.

This finding, though unexpected, contributes to Ludlow’s (2008) argument that abortion narratives are subconsciously hierarchized. That is, people in abortion care and advocacy easily talk about the abortions from rape and trauma because they are more “acceptable” reasons for pregnancy termination; these scenarios induce empathy. People often do not feel sorry for abortion seekers when they perceive them to have been in control of the situation resulting in pregnancy or if they do not have an “acceptable” reason for ending a pregnancy (Hans & Kimberly, 2014; Ludlow, 2008). Thus, these narratives (e.g., lack of finances, readiness) are not often spoken about even though they are the norm (Ludlow, 2008). If educators and advocates

only use narratives of people who seek abortions out of trauma or emergency, empathy may be learned for certain pregnancy situations and not others.

Effect of Personal Experiences and Traits on Empathy

Past experiences of abortion and sexual assault experience affect empathy scores. Our results are consistent with research that having a previous relevant experience will increase empathy (e.g., Glynn & Sen, 2015; Moyer & Haire, 2015; Wiener, Felman Wiener, & Grisso, 1989) and knowing just one person who is part of a stigmatized population can affect attitudes toward that population (DellaPosta, 2018). Many of the people in our study had abortion experience and therefore, may have empathized with the testimonial woman because they were linking her experience to theirs.

This is an important implication for future interventions with empathy for abortion seekers—focusing on people and experiences that are personal to them. However, abortion is an easily concealable event. A safe and complete abortion allows for some invisibility because there are no visibly obvious lasting outcomes, which permits women to keep it to themselves (Kumar et al., 2009). With the prevalence of abortion, chances are, most people know someone who has had an abortion (Dreweke, 2017; Guttmacher Institute, 2017a). Yet, the people who may have the least permissive attitudes toward abortion seekers may not know they know someone who has had one. Individuals who have had an abortion may be hesitant to share this with people in their lives that are unsupportive of reproductive choice, especially if their stories involve seeking an abortion for an “unacceptable” reason (e.g., not wanting to have a child, multiple abortions).

This lack of transparency affects the empathy people are conditioned to feel. On the chance that people do hear stories from friends and family who have had abortions, but only

trauma abortion narratives, their capacity for empathy may be skewed. If they hear the story of a person who sought an abortion because they did not use a condom, they may differentiate which pregnancy scenarios are worthy of termination. Therefore, it is important that people and partners with any abortion story share more openly. This could create more empathy among their networks and normalize the experiences of many abortion seekers without an “acceptable” reason. There are some advocacy projects (e.g., Shout Your Abortion, the Sea Change Program, 1 in 3 Campaign) that have focused on sharing complete or untold abortion narratives via an online media platform. However, few of these projects have the format (e.g., means of data collection) to track the impact these stories have on the people who view them. Combining lessons learned from this project with the strategies used in those videos could normalize the open sharing of abortion narratives. Normalizing abortion narratives could lessen stigma so the general population could connect their personal experiences to testimonial interventions and educational initiatives.

Limitations

This study had many strengths including its randomized-controlled design, innovative approach to intervention, and focus on abortion seekers in Arkansas. However, there were also several limitations to note. The sample, although randomly assigned to conditions, were not randomly selected from the population of Arkansas and therefore, not fully generalizable to all Arkansans. There is the possibility of self-selection bias. However, we offered compensation for participants to increase motivation so even people who were indifferent about abortion would be more inclined to participate.

As with experimental interventions, we cannot infer causality from the effect of the videos. It may be of note that the Black testimonial actor was a Master of Fine Arts student,

whereas the White testimonial actor was a third-year undergraduate student. Although they both had similar levels of acting experience (i.e., involvement in numerous productions), there may be a difference in the perceived quality of their acting. It could have been that the actor who was Black was more effective at inducing empathy than the actor who was White. However, there were no significant differences in source credibility and if this was the sole factor, there should have been a significant difference in empathy for those who watched the Black woman who had consensual sex as well.

Additionally, there may be limitations related to social desirability bias and the format of online media interventions. Participants may not have watched or paid attention to the whole video. However, the survey settings prevented participants from leaving until the entire video had played.

Implications and Future Directions

Findings from this study have implications for future research and intervention work. First, we encourage health educators and researchers to use video-based testimonials in their programs and studies to lend a story to their statistics. Utilizing personal experiences may enhance the effects of interventions. Making this issue personal will increase empathy and make it easier to perspective-take. Research indicates that empathy induction can increase prosocial behavior (e.g., willingness to engage with stigmatized populations; Wang, Tai, Ku, & Galinsky, 2014). Lessening stigma for people who seek abortions triggers a feedback loop so they will be more comfortable to share their stories, people they interact with will hear their story, making individuals in their network more susceptible to empathy-based interventions and shifting attitudes.

To apply the implications from this study, future research should intervene with people who are opposing, unsure, or ambivalent about abortion. Educators and researchers should focus on those who do not think they know anyone who has had an abortion, then reveal that they most likely do know someone who had an abortion to further explore the effect of personal experiences and empathy induction.

Second, it is important to be strategic with the abortion narratives used in this work. “Socially acceptable” narratives (e.g., rape) create an emotional buy in so it may be wise to start with those stories. But it is also important to address other mundane reasons for abortion (e.g., finances) so as to not further perpetuate stigmas of “worthy” and “unworthy” abortions. A woman of color was effective in inducing empathy in this study. However, the majority of this sample were White women. In the future, researchers should examine trait empathy among women of color and men to see if race and perceived pregnancy responsibility are viewed differently among these populations.

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Appendices

Table 5.1

Participant Demographics (N = 369)

Characteristic	N (%)	Characteristic	N (%)
Sex		Sexual Orientation	
Male	104 (28.2)	Heterosexual	329 (89.2)
Female	264 (71.5)	Gay/Lesbian	14 (3.8)
Race		Bisexual	20 (5.4)
White or Caucasian	312 (84.6)	Queer	6 (1.6)
Black or African American	24 (6.5)	Education Level	
Latino/a	12 (3.3)	High school graduate/GED	39 (10.6)
Asian or Asian American	4 (1.1)	Some college/associate degree	104 (28.2)
Bi- or Multi- racial	8 (2.2)	College degree	183 (49.6)
Income Level		Graduate degree	41 (11.1)
Low	23 (6.2)	Political Party	
Lower-Middle	102 (27.6)	Republican	120 (32.5)
Middle	126 (34.1)	Democrat	139 (37.7)
Upper-Middle	57 (15.4)	Libertarian	58 (15.7)
High	61 (16.5)	None	39 (10.6)
Relationship Status		Abortion Identity	
Married	218 (59.1)	“Pro-Life”	66 (17.9)
In a relationship	68 (18.4)	“Pro-Choice”	269 (72.9)
Single and not dating	43 (11.7)	Neither	13 (3.5)
Single and dating	28 (7.8)	Both	18 (4.9)
Abortion Experience (self and/or others)		Sexual Assault Experience (self and/or others)	
Yes	275 (74.5)	Yes	306 (82.9)
No	65 (17.6)	No	47 (12.7)
Not Sure	29 (7.9)	Not Sure	16 (4.3)
Social Desirability <i>M</i> (SD)	5.04 (2.16)		

Table 5.2

Mean Scores of Empathy Characteristics for Women who seek Abortions/Woman in Video at Post-test and Follow-Up

	Post-test		Follow-Up	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Sympathetic	5.54	1.32	5.44	1.45
Moved	5.15	1.46	5.04	1.46
Compassionate	5.58	1.31	5.35	1.42
Tender	5.21	1.59	5.03	1.58
Warm	5.05	1.72	4.81	1.67
Soft-hearted	5.30	1.60	4.93	1.57
Sum Score	31.81	7.59	30.11	8.32

Note. Empathy characteristic subscale scores range from 1-7 and sum scores range from 6-42.

Table 5.3

Chi-Square Results for Post-test Empathy Characteristic Scores and Perceived Pregnancy Responsibility Video Condition (N = 263)

	Rape Testimonial 46.4% (n = 122)		Consensual Testimonial 53.6% (n = 141)		χ^2	Cramer's <i>V</i>
	<i>n</i>	%	<i>n</i>	%		
Sympathetic					7.672*	.171
No	5	25.0	15	75.0		
Neutral	4	25.0	12	75.0		
Yes	113	49.8	114	50.2		
Moved					7.937*	.174
No	8	28.6	20	71.4		
Neutral	12	33.3	24	66.7		
Yes	102	51.3	97	48.7		
Compassionate					3.364	.113
No	5	27.8	13	72.2		
Neutral	10	40.0	15	60.0		
Yes	107	48.6	113	51.4		
Tender					12.192**	.215
No	11	28.9	27	71.1		
Neutral	7	25.9	20	74.1		
Yes	104	52.5	94	47.5		
Warm					7.230*	.166
No	17	32.7	35	67.3		
Neutral	10	35.7	18	64.3		
Yes	94	51.6	88	48.4		
Soft-hearted					8.106*	.176
No	9	26.5	25	73.5		
Neutral	14	38.9	22	61.1		
Yes	99	51.3	94	48.7		

Table 5.4

Means, Standard Deviations, and Intercorrelations for Empathy Sum Scores and Predictor Variables (N = 364)

Variable	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.
Post-test Empathy Sum Score	31.82	7.617	.165**	.066	-.351***	-.245***	.260***	.045
Follow-up Empathy Sum Score	30.43	7.821	.184***	.114*	-.351***	-.224***	.211***	-.070
Predictor variable								
1. EC ^a	24.99	5.174	--	.183***	-.025	.143**	-.016	.088*
2. Social Desirability	5.04	2.163		--	.021	-.013	-.094*	-.093*
3. SA Exp ^b					--	.423***	-.280***	.167
4. Abortion Exp ^c						--	-.360***	.146
5. Sex							--	.136
6. Video Condition								--

Note. ^aEC = Empathic Concern; ^bSA Exp. = Sexual Assault Experience; ^cAbortion Exp. = Abortion Experience. Three correlation types are reported per variable type: Pearson *r*, point-biserial, and phi correlation. Means and standard deviations are only reported for continuous variables.

p* < .05; *p* < .01; ****p* < .001.

Table 5.5

Hierarchical Regression Analysis Predicting Post-test Empathy Sum Scores with Empathic Concern, Social Desirability, Sexual Assault Experience, Abortion Experience, Sex, Video Condition (N = 364)

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>	<i>R</i> ²
<u>Step 1</u>					.150***
EC ^a	.217	.073	.148**	.003	
Social Desirability	.164	.174	.047	.348	
SA Exp. ^b	-5.234	.731	-.348***	<.001	
<u>Step 2</u>					.179***
EC ^a	.260	.073	.177***	<.001	
Social Desirability	.133	.172	.038	.440	
SA Exp. ^b	-4.400	.756	-.293***	<.001	
Abortion Exp. ^c	-2.282	.637	-.182***	<.001	
<u>Step 3</u>					.198***
EC ^a	.251	.072	.170**	.001	
Social Desirability	.187	.171	.053	.275	
SA Exp. ^b	-4.017	.759	-.267***	<.001	

Table 5.5 (Cont.)

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>	<i>R</i> ²
Abortion Exp. ^c	-1.718	.659	-.137**	.009	
Sex	2.549	.866	.151**	.003	
<u>Step 4</u>					.208***
EC ^a	.235	.072	.160**	.001	
Social Desirability	.227	.171	.065	.184	
SA Exp. ^b	-4.226	.762	-.281***	<.001	
Abortion Exp. ^c	-1.774	.656	.152**	.007	
Sex	2.557	.862	.101*	.003	
Video Condition	.514	.246	-.137**	.037	

Note. ^aEC = Empathic Concern Score; ^bSA Exp. = Sexual Assault Experience; ^cAbortion Exp. = Abortion Experience.
 β = Standardized coefficient; *B* = Unstandardized coefficient; *SE B* = Standard error; *R*² = variance explained by the model.
 p* < .05; *p* < .01; ****p* < .001.

Table 5.6

Hierarchical Regression Analysis Predicting Follow-up Empathy Sum Scores with Empathic Concern, Social Desirability, Sexual Assault Experience, Abortion Experience, Sex, Video Condition (N = 364)

Variable	B	SE B	β	p	R ²
<u>Step 1</u>					.138***
EC ^a	.241	.075	.160**	.001	
Social Desirability	.329	.180	.091	.069	
SA Exp. ^b	-4.825	.755	-.313***	<.001	
<u>Step 2</u>					.164***
EC ^a	.283	.075	.187***	<.001	
Social Desirability	.299	.178	.083	.094	
SA Exp. ^b	-4.021	.783	-.261***	<.001	
Abortion Exp. ^c	-2.202	.660	-.171**	.001	
<u>Step 3</u>					.175***
EC ^a	.275	.075	.182***	<.001	
Social Desirability	.340	.178	.094	.057	
SA Exp. ^b	-3.727	.791	-.242***	<.001	
Abortion Exp. ^c	-1.770	.686	-.138*	.010	
Sex	1.955	.902	.113*	.031	

Table 5.6 (Cont.)

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>	<i>R</i> ²
<u>Step 4</u>					.175***
EC ^a	.279	.075	.185***	<.001	
Social Desirability	.331	.179	.091	.066	
SA Exp. ^b	-3.678	.798	-.238***	<.001	
Abortion Exp. ^c	-1.757	.688	-.137*	.011	
Sex	1.953	.903	.113*	.031	
Video Condition	-.120	.258	-.023	.641	

Note. ^aEC = Empathic Concern Score; ^bSA Exp. = Sexual Assault Experience; ^cAbortion Exp. = Abortion Experience.

β = Standardized coefficient; *B* = Unstandardized coefficient; *SE B* = Standard error; *R*² = variance explained by the model.

p* < .05; *p* < .01; ****p* < .001

CHAPTER 6: OVERALL CONCLUSION

This study aimed to shift the way people think about abortion via a YouTube video, a medium many people use to get their information (Pew Research Center, 2017). In conceptualizing this project, I was inspired by the campaign and website *Shout Your Abortion* (see Figures 6.1 and 6.2). It is a space for people to share abortion stories through text and videos to describe and normalize abortion experiences. Some video narratives portray people who had fulfilling and empowering experiences obtaining an abortion. Some narratives portray guilt or coming to terms with their abortion decision. No matter the story, they all contribute to the *Shout Your Abortion* motto: Abortion is normal.

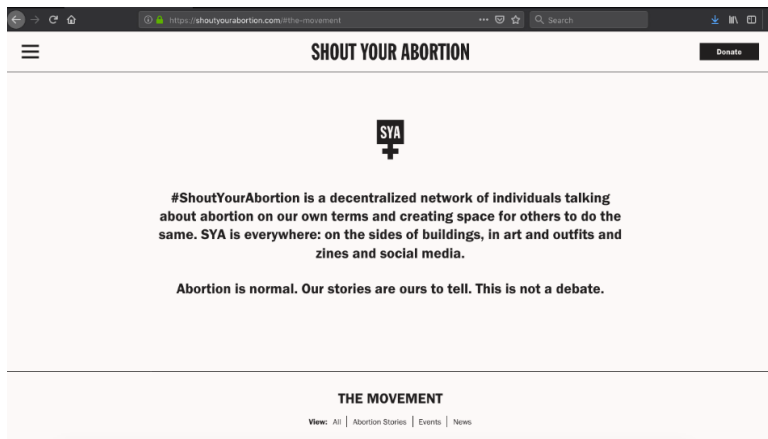


Figure 6.1. *Shout Your Abortion* motto. Source: shoutyourabortion.com

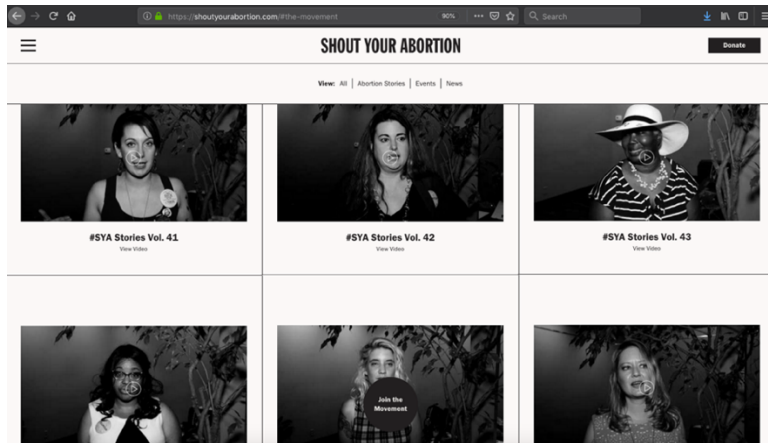


Figure 6.2. *Shout Your Abortion* video narratives. Source: shoutyourabortion.com

After completing the project, I learned of other advocacy endeavors that focus on telling the untold and complete stories of abortion—some in the form of written word or video diary (e.g., The Sea Change Program, Echoing Ida, the 1 in 3 project). Each operates under the idea that the more exposure to abortion stories in the public, the more abortion stigma can be broken down. However, I questioned the primary audience of these websites—most people who visit them are probably not people looking to challenge their anti-choice ideology. Research shows people do not seek out media that conflicts with their beliefs (Knobloch-Westerwick & Meng, 2009). In order to reach a broader audience, I used what I learned from my health education coursework and research experience to create and distribute an intervention using *Shout Your Abortion*-style narratives.

Living in Arkansas, I recognized a unique opportunity to test this intervention in one of the most restrictive states for abortion access in the U.S. (Center for Reproductive Rights, 2018; Guttmacher Institute, 2016b; Nash et al., 2017). Nationwide, research indicates that people are underinformed about abortion legislation (e.g., Bessett et al., 2015; Kavanaugh, Bessett & Littman, 2013; Cockrill & Weitz, 2010; PerryUndem & Vox Media, 2016; White et al., 2016). My intervention specifically addressed how these legislative restrictions affect people living in the state of Arkansas. I did not want to administer an intervention showing abortion narratives if the audience members were unaware of the abortion landscape in their state. Thus, there had to be an informational component first. Inspired by *Shout Your Abortion*, I created videos to increase awareness of restrictions in Arkansas and show narratives of women's experiences seeking an abortion amid these restrictions in Arkansas.

Overall Findings and Implications

The purpose of the intervention videos was to decrease support for abortion restrictions by increasing knowledge and shifting empathy in Arkansas residents. The purpose of the study was to examine the efficacy of the intervention on Arkansans' knowledge and support of restrictions and empathy for abortion seekers. In executing this project, five findings emerged with potential implications for future intervention work.

Finding 1: Watching a testimonial helped knowledge retention. Contrary to our hypothesis, those who viewed an empathy-based intervention video had significantly higher knowledge scores at post-test and follow-up than those in the control. Giving people information in combination with a story that reiterated facts in another way (e.g., what a 48-hour waiting period means for someone who lives 3 hours from a clinic) may have reinforced knowledge retention. As such, it may be important for educators and researchers to use a narrative when administering informational interventions.

Finding 2: Disregarding video condition, support for restrictions was higher than expected. We predicted that a story demonstrating the real-life implications of abortion restrictions in Arkansas would decrease support for these laws compared to a video that only disseminated information (i.e., no testimonial). Results indicated that support for restrictions did decrease across the study. However, there were no differences in support scores by testimonial and, instead, support for restrictions at follow-up remained higher than anticipated. Adjusting attitudes on this subject may require a larger cultural shift, especially in hostile states like Arkansas. Future interventions might focus on debunking the myth that restrictions are mechanisms of health and safety for women seeking abortions (Weitz, Moore, Gordon, & Adler, 2008).

Finding 3: The rape narratives were more effective in inducing empathy than the consensual-sex narratives. In designing our testimonials, we aimed to see if factors that contributed to the pregnancy played a role in empathy for abortion seekers. People who watched a testimonial with a rape narrative had higher individual empathy characteristic scores (e.g., warm, tender) compared with those who watched a consensual-sex narrative. This finding contributes to Ludlow’s (2008) argument that abortion narratives are subconsciously hierarchized. Those in abortion care and advocacy easily talk about the abortions from rape and trauma because they are more “acceptable” reasons for pregnancy termination; these scenarios induce empathy (Hans & Kimberly, 2014; Ludlow, 2008; Martin, Hassinger, Debbink, & Harris, 2017; Smith & Son, 2013). Thus, “unacceptable” narratives (e.g., lack of finances, readiness) are not often spoken about even though they are the norm (Ludlow, 2008). If educators and advocates only use narratives of people who seek abortions out of trauma or emergency, empathy may be learned for certain pregnancy situations and not others. People leading interventions, discussions, and advocacy initiatives must work to share all abortion narratives equally.

Finding 4: The testimonial portraying a Black woman who was raped created the most empathy. Although there was no effect of race of the actor in individual feeling scores, there was one testimonial--the Black woman who was raped--that had a significant effect on total empathy score (i.e., all of the feelings scored together). Our sample was highly education and leaned more liberal than conservative; if the education level and liberal opinions of our sample were associated with higher social tolerance (Kozloski, 2010), perhaps feeling more empathy for the Black woman was related to understanding Black women’s societal marginalization (e.g., realizing that the experiences of women of color are different than the experiences of White

women; Boonstra, 2016; Jones & Kavanaugh, 2011). Alternatively, the empathy from our participants for the Black woman who was raped could have manifested from an “underlying racial paternalism” (Baker, 2015, p. 93). If this sense of paternalism was a contributor in our sample, educational initiatives may need to address cognitive processes related to underlying racism behind abortion attitudes in addition to shifting empathy.

Finding 5: Personal experiences are key to inducing empathy about abortion.

Finally, factors that consistently predicted empathy induction at post-test and follow-up were past experiences with abortion and sexual assault experience. Many of the people in our study had abortion experience and therefore, may have empathized with the woman in the testimonial because they were linking her experience to theirs. Focusing on experiences that are personal to them is imperative to inducing empathy for abortion seekers.

However, abortion is an easily concealable event and stigma contributes to a lack of transparency among people who have had abortions (Norris et al., 2011). This affects the empathy people are conditioned to feel. Health education programs should encourage dialogue so that people and partners with an abortion story will share their experiences more openly. This could create more empathy among networks and normalize the experiences of many abortion seekers without an “acceptable” reason, especially because these experiences are among the most common (Ludlow, 2008). Normalizing abortion narratives could lessen stigma so the general population could connect their personal experiences to the reproductive rights movement.

Contributions to the Field

There are many reproductive health research teams across the country that focus on abortion (e.g., ANSIRH, Ibis Reproductive Health, Bixby Center, Texas Policy Evaluation

Project). Many of these teams track outcomes of abortion restrictions or conduct qualitative interviews to understand the experiences of people who have sought or obtained abortion care. Findings from these studies have been used to inform policy and improve provision of abortion.

For example, the Turnaway Study, conducted by the ANSIRH team, headed by Diana Greene Foster, PhD, conducted 8,000 interviews with women from 2010 to 2015. They recruited participants from abortion facilities across the country. All the women in the study sought abortions; some were able to obtain them and some were turned away. Of the “turnaways,” some women were able to obtain an abortion at a different location or time; some carried their pregnancies to term because they were past the gestational limit. This study’s findings offered empirical evidence that women who are forced to keep a pregnancy after seeking an abortion report health and wellbeing hardships compared to women who were able to obtain an abortion (e.g., Foster, Biggs, Ralph, Gerdt, Roberts, & Glymour, 2018; Foster, Steinberg, Roberts, Neuhaus, & Biggs, 2015; Upadhyay, Biggs, & Foster, 2015). Further, it demonstrates that denying women abortion care has serious consequences, which can be cited when arguing the harm of abortion restrictions.

Although the current study was not as large-scale (or well-funded) as studies from these abortion research teams, it does offer several additions to the field and a jumping off point for subsequent studies. The first addition is in its innovative design. It is the first video-based intervention experiment, to our knowledge, that focused on abortion restrictions and empathy. Advocacy projects (e.g., Shout Your Abortion, the Sea Change Program, 1 in 3 Campaign) have also focused on sharing complete or untold abortion narratives as a way to induce empathy via an online media platform. However, few of these projects have the format (e.g., means of data

collection) to track the impact these stories have on the people who view them. We were able to compare data from baseline, to after viewing a video, to two-weeks later.

Second, this study used a state-specific sample and asked state-specific restriction questions. Other surveys have focused on state-specific restrictions, but did not have a state-specific sample. For example, the Vox Media Poll (2015) asked about attitudes towards Texas restrictions in the time leading up to the *Whole Women's Health v. Hellerstedt* (2016) Texas court case. However, their sample was a nationally representative group of U.S. residents. Although their data were representative of people's attitudes across the U.S., asking someone who does not live in Texas about laws in Texas may yield attitudes about restrictions that are abstract or hypothetical. Asking an Arkansan about Arkansas laws encourages critical thinking about restrictions that could actually affect them.

With this project, we also incorporated race and perceived pregnancy responsibility into the dialogue about social inequalities regarding abortion. Using an intersectional lens to the analyses and discussion, we aimed to assess underlying biases that are discussed less often in conversations about abortion access. Scholars have made a concerted effort to draw attention to the racial inequalities within reproductive access (e.g., Kumar, 2013; Price, 2011). Regarding pregnancy circumstance, rape is a commonly accepted exception to abortion restrictions (Guttmacher Institute, 2017d; Mikoajczak & Bilewicz, 2015; Nash et al., 2017; Smith & Son, 2013). However, the intersection of race and perceived pregnancy responsibility had yet to be explored.

We assumed an implicit bias against Black women would result in higher empathy for the White woman who told her abortion narrative. But prejudice may have contributed to different

results than we anticipated—that of underlying racial paternalism. This also fits in with hierarchizing abortion narratives (e.g., having more empathy for women who are raped). In both topics, people differentiate circumstances under which they support abortion and circumstances under which they do not (i.e., circumstantial caveats; Hunt, Marcantonio, Jozkowski, & Crawford, forthcoming; Jozkowski, Crawford, & Hunt, 2018; Smith & Son, 2013). In order to induce empathy, it is important to draw attention to these caveats so people may realize there are conflicts within their attitudes. Yet, having any caveat with abortion attitudes perpetuates paternalism—that one can inflict their opinion on an abortion seeker’s circumstances. This leads to, arguably, the crux of shifting people’s attitudes toward abortion: how do we get people to trust and support women unconditionally? How do we get rid of caveats? Empathy and education may be strategic components to achieving this goal. However, one must pay special attention to incorporating social inequalities, addressing internal biases related to racism and abortion narrative hierarchy, and drawing on one’s personal experiences.

Future Directions

I aim to publish and present the subset of data I analyzed from this project. First, I plan to submit abstracts to the American Public Health Association and the Society of Family Planning annual meetings with data from these two manuscripts. I intend to submit the first manuscript (knowledge and support for restrictions) to *Sexuality Research and Social Policy* because of its restriction focus. The second manuscript (empathy) is intended for *Perspectives on Reproductive Health*.

I have two projects in progress with colleagues from Arkansas and Michigan. Concurrent with the dissertation, I have been working with a University of Arkansas Masters student on her thesis. We are using these data to analyze the role of Social Dominance Orientation on abortion

attitudes (scale modified from Batson et al., 1997) and Empathic Concern. She will complete her thesis and we will prepare a manuscript from this analysis.

Additionally, I met with a collaborator from the University of Michigan, Sara McClelland, PhD, who is familiar with the Inclusion of Other in the Self (IOS) scale (Aron, Aron, & Smollan, 1992). We are planning to write a paper together on the video's effect on affinity people feel for a woman who has had an abortion using the IOS scale. We plan to submit an abstract to the Forum with these data as well.

In planning outcomes from this study, a secondary aim was to examine how attitudes may affect voting behaviors and encourage individuals to act by supporting progressive candidates. Findings indicated a lack of awareness and high support of restrictive laws in Arkansas, which can certainly influence people's voting intentions. I plan to analyze these data for a future manuscript.

I received a 2018-2019 HHPR graduate student research grant to collect more data on this project. I plan to re-administer the experiment to gather a different sample. Since the first experiment was administered, changes in the make-up of the Supreme Court have increased threats to *Roe v. Wade*. Closer to the election year I intend to compare abortion influence on voting intention data from the first wave of data collection to the second wave.

Finally, I am looking forward translating these data to a more applied approach. On my interview at Western Washington University, the job I accepted for the fall, I met with the person who coordinates the health peer education program. She used to work for Planned Parenthood and is very interested in collaborating on research. I hope we can use the findings from this

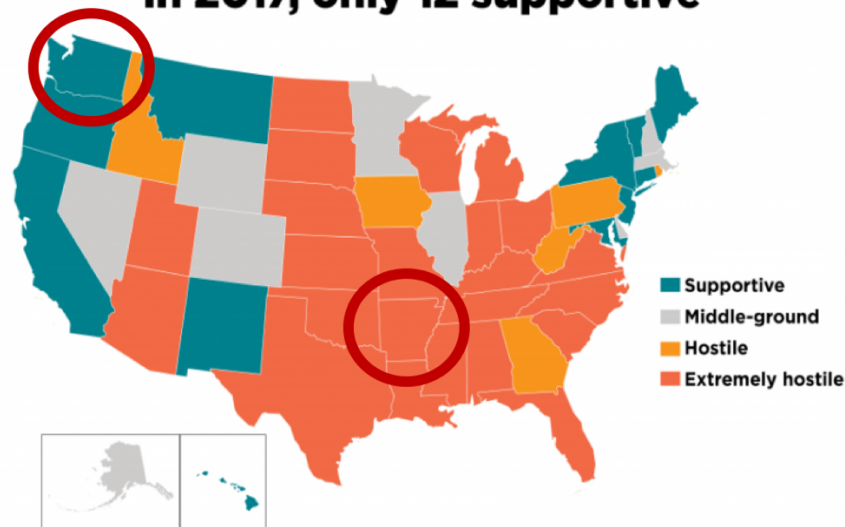
study, to work with peer educators and community members to create an abortion education program.

Research Trajectory

This project inspired subsequent projects and identified gaps within the current abortion literature. I have two projects planned for the immediate future. To build on the support for abortion restrictions finding of this project, I plan to conduct in-depth interviews exploring people's perceptions of abortion legislation--do they think restrictions harm or help abortion seekers? Additionally, I am interested in where people's perception of abortion experiences come from. I have experience with content analysis of media. There is one study by Sisson and Kimport (2014) that examines how abortion is portrayed in tv and movies. However, I plan to expand on that study and use a coding framework inspired by our consent in the media project (Jozkowski, Canan, Rhoads, & Hunt, 2016) to examine how abortion and other reproductive practices are portrayed in the media.

Last, I hope to make connections in my new community and work with clinics to collect data and inspire new projects. I am interested in conducting reproductive health research in Washington state. Perhaps I will even find a way to compare the two states as living in one of the most restrictive and then one of the most supportive (see Figure 6.3).

29 states were hostile or extremely hostile to abortion rights in 2017, only 12 supportive



gu.tt/statetrends2017

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Figure 6.3. Infographic of the most restrictive and supportive states in 2017. Source: Guttmacher.org, circles added by the author for emphasis.

Lessons Learned and Personal Reflection

In contemplating my professional and personal growth over five years (seven years at the University of Arkansas), I think of the mistakes and deviations from my plan (satirically illustrated in Figure 6.4), the people that have helped me, and the things I thought went wrong, only to discover they went right all along.

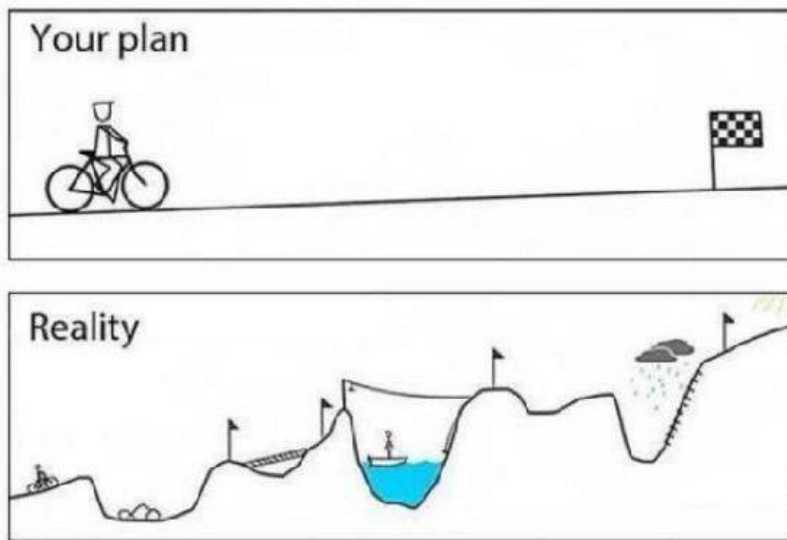


Figure 6.4. Illustration of a PhD plan vs. reality. Source: Twitter.com

The dissertation process. I learned three primary lessons from the execution of this project: kindness will get you further, things will go wrong, and knowing people/networking is vital to success. This project exposed the internal workings of my institution to which I was previously oblivious. There are gatekeepers to successful execution of research and, first, one must identify these key stakeholders. Accessing grant funds required the help of our departmental administrative assistant, Shari Witherspoon, and multiple people in the office for Research and Sponsored Programs. To use the funds to buy incentives, there were several steps and forms that I would not have known about had it not been for these personnel. I learned there are some tasks within a structure that I could not do on my own. To complete a project, one needs patience, organization, kindness, and persistence.

Creating specialized media (i.e., the videos) was another lesson in patience. The person from Production Services who initially agreed to shoot my intervention videos backed out suddenly. I had been in contact with this person for several months and his estimates were

accounted for in my grant budget. It was through Dr. Jean Henry, a faculty mentor with a brother in IT, that I found the freelance video production specialist I hired.

I learned how to make a casting call. I had to troubleshoot when only White women replied with interest. It was through one of the actors I hired that I was put in touch with an actor of color who was interested in working on the project. Moreover, because my actors were in other shows on campus, organization and, again, persistence were imperative to scheduling the video shoots. One actor did not show up one day and one actor did not have her part memorized. So I problem-solved.

In addition to the administrative lessons learned, personally, I found the dissertation process to be isolating. I am able to reflect on the misery I felt in the beginning now that I see a light at the end of tunnel. The elation of the project being funded was eclipsed by a lack of confidence and motivation. It was an ambitious project. But, perhaps, the most debilitating part of the dissertation process was, for me, its conjunction with the job search and trying to figure out what kind of academic I wanted to be.

The doctoral process. I started studying sexuality when I was an undergraduate student at Kansas State University. It was in a class during my sophomore year where I first saw a Sexual Health Peer Educators (SHAPE) presentation. Three undergrads talked about condoms and risky behaviors; they were so funny and confident, blowing up a condom and putting it over their head to demonstrate the durability of condoms. The audience was in an uncomfortable hush and then erupted into laughter. I joined SHAPE to gain confidence and to make people laugh and think. I became the co-president and simultaneously interned in the health promotion department of the student health center my senior year of college.

I started looking at Masters of Public Health Programs in states north of me. I wanted to get out of Kansas and go somewhere where sex education was valued and funded. But, life is funny and my aunt, who works for the University of Arkansas, is very persuasive. I went South instead. I started at the University of Arkansas in 2012 in the Master's program. I was awarded a graduate assistantship to teach health classes and began working with my mentor, Dr. Kristen Jozkowski, who was just starting her career at the University of Arkansas. Over seven years, I gained experience teaching college students and conducting sexuality research.

Teaching progression. I taught classes for six years—starting with introductory level classes like Medical Terminology. For the first few semesters, I used the pre-made textbook lectures and was learning the material along with my students. I remember reading my student evaluations and crying. But I also took some of the student feedback and improved the course materials and my teaching approach. Students told me they wanted more engagement with the health terminology, so I created a group presentation assignment where they had to present words to their peers. Students told me I was funny, so I began making the lectures my own, incorporating anecdotes, pictures, and pneumonic devices.

I grew as a teacher when I co-instructed a senior-level health class, Applied Health Behavior Theory, with my mentor, Dr. Jozkowski. The course material was challenging and abstract. At first, I was intimidated—especially sharing the front of the room with an actual professor. When it was my turn to lecture, I used my strengths to reconstruct the presentations in a way that made sense to me, which helped me master the material. The students responded positively to my approach and I took over the class in subsequent semesters. Dr. Jozkowski's organization and model for the class demonstrated a quality higher level class that I was able to personalize.

Diversifying my teaching dossier with courses like Human Sexuality, Personal Health and Safety, and Public Health Internship built my confidence and confirmed my passion for teaching. Two student evaluation comments I am most proud of were: “I feel significantly more prepared to enter into the public health workforce because of the things I learned in this course” (Applied Health Behavior Theory) and “Everyone felt safe and open sharing their stories because you cultivated an environment of respect and tolerance. We were enthusiastic to speak up because you made it clear that we would be heard!” (Human Sexuality).

Research progression. Simultaneously with my teaching progression, I learned to be a researcher. I had the unique opportunity to begin my research journey as Dr. J was beginning her career as a professor and mentor at the University of Arkansas. Our first project together was analyzing in-depth interviews with college students. We read the interviews separately and then met in her office to discuss our findings. From these interviews, I realized my penchant for identifying themes in qualitative data, which inspired my master’s thesis. For my thesis project, I conducted a salient belief elicitation (SBE; Middlestadt et al., 1996). I was able to understand SBE on a deeper level because of its foundation in Reasoned Action Approach, a theory Dr. J taught me. I was then able to effectively explain the Reasoned Action Approach in my theory classes. Additionally, I taught this technique to an undergraduate honors’ student, undergraduate research assistants, and doctoral students.

Skilled researchers must also adequately disseminate their work. My first solo research presentation introduced my thesis data to the department research seminar. I was nervous, sweating, and not natural or smooth. Prior to the presentation, I practiced for our undergraduate research assistants. One of them told me I said “uh” so much he wanted to “strangle me.” I remember Dr. J telling me there was no shame in having a notes sheet. For my next

presentations, I wrote out what I was going to say and my performance improved. I don't remember when it clicked for me that giving research presentations was just like giving a lecture in class. For some reason, I hadn't connected the two skills. I gave more presentations—in seminar, at conferences, for university events. Dr. J told me at my last presentation for the department seminar it was the best presentation she had seen me give.

In cultivating skills as an individual researcher, I also learned the importance (and fun) of collaboration. Over seven years, I was able to observe inter-group dynamics change with the flux of graduate students in and out of Dr. J's lab. The first research group iteration comprised myself, Kelley Rhoads, and Sasha Canan. With Dr. J, the four of us embarked on an intensive content analysis project, where we analyzed mainstream movies and coded sexual scenes for variables related to consent. It was the most fun I ever had collecting data.

Sasha and Kelley graduated and two new doctoral students, Tiffany and Malachi, joined the lab. They were from counseling psychology and clinical psychology programs respectively; with their background, came a hunger and competitiveness for publications and productivity. I felt inadequacy, anxiety, and had started viewing research more from the lens of how it could advance my career rather than a way to examine aspects of sexuality. I admit it was this competitiveness that pushed me as a researcher. I applied for and got several grants to fund an ambitious dissertation experiment, worked with others to publish papers, and presented annually at conferences. I liked the collaboration and creativity of research, giving feedback, and having critical conversations about gender, feminism, and societal programming. It was the pressure of producing for admiration, prominence, and rank that made me question what kind of environment in which I would excel. Specifically, I was unsure if I would thrive in a “publish or perish” academic position.

Searching for an academic position. Articulating these experiences, I realize now that I always wanted to be a teacher first. I solidified my identity in Arkansas. It was my charge to give young adults of the Midwest and South the comprehensive sex education most were deprived of as kids. I wanted them to question the anti-feminist messages that many may have been exposed to during their upbringing, to cultivate their confidence so they would take ownership of their sexuality and health. But I struggled coming to terms with that. I was influenced by the hierarchy of Research I universities and the prestige that comes with being a researcher first. I was worried I would lose the research skills I gained in the seven years I worked under Dr. J if I sought a teaching-heavy position. It was hard to figure out my next step when I was searching for a job and confidently market myself. This indecisiveness, in addition to the gendered nature of interviewing, made the search feel hopeless. As a woman raised in the Midwest, I was encouraged to be humble--not to brag.

Everyone thinks a PhD will go according to plan. I thought, “others may take extra years and run into problems that extend their doctoral work, but that’s not me.” It was. Even if I had finished my dissertation “on time,” there was no job. I read articles about how competitive the tenure-track job market was. It was true. It did not help that I applied everywhere but had my heart set on being in the middle of the country--where I felt I was needed.

In the end, I applied to 37 jobs in 14 months, had 13 phone/skype interviews, and went on 6 on-site interviews. The first three on-sites were in my fourth doctoral year. Getting a job during that round would have put me on track for what I had planned in terms of my theoretical vision for my career. But, there were no good fits. I began to panic. “What will I do? Will I move back in with my parents?” I went through the stages of academia grief. “Do I really want to be part of the Ivory Tower? It is not easily accessible for people and there are so many privileged students

who do not take college seriously. Am I helping the right people? Maybe I'll just get a 9-5 job. I'll work in a health department. Something stable." I applied for a few jobs outside of academia.

But, I talked with a friend, who came from a socially disadvantaged upbringing, and he changed my mind. He told me college opened doors for him that would never have been opened otherwise. He reminded me of why I wanted to be a college professor. I applied for a fifth year of doctoral funding and took a second crack at the academic job market. I went on another three on-site interviews and felt I hit my stride. I figured out how to talk about myself. And I found a school that was a good fit. I will be starting as a tenure-track Assistant Professor of Community Health Education at Western Washington University in the Fall of 2019.

Accepting that job sparked another, slightly smaller, existential crisis. "I can't go to Washington. It's a blue state." There was another grieving process—of my former identity: being a sexual health educator in a place where I felt I was needed. That is not to say that there is not work to be done in Washington. But my identity came from going to conferences, like the Forum on Family Planning, and seeing all of the sexuality research and abortion provision from people on the coasts. I took pride in knowing that I was doing the work in a place with one procedural abortion provider and no mandated sex education. I felt as though I would be abandoning my post. But it's time for a change and I have to give myself permission to make a difference in a new area.

My graduate work and academic career so far have taught me many things about how the world works. When at social events making small talk with new people, every day comes with a choice when asked "what do you study?" My interactions change depending on what I say. Do I say "abortion?" "Sexuality?" "Public health?" I usually settle on "women's health." But then I

kick myself because this statement brings to mind babies and menstruation and eating right for your figure--everything that Women's Health magazine has made it to be. It's safe. But yet it's an act of self-preservation. If you come in hot with a "I study ABORTION" it can shut the conversation down pretty quickly. That's not what I want. I never want to shut people down. I want to open them up and have meaningful conversations free of coercion, shame, and stigma.

Studying sexuality and abortion has taught me about the power of language. Of pronouns. Of the constant recalibration of inclusive terms. It has taught me about reading the room. It has taught me about inclusivity--the problem with the phrase "women who seek abortions." It has taught me about power and intersectionality. It has pushed me to be a better activist, academic, and person. It has taught me to be more empathetic. It has taught me to check my privilege in my life and in my career. It has taught me who I am and who I want to be. And that is something I will carry with me, no matter where I live.

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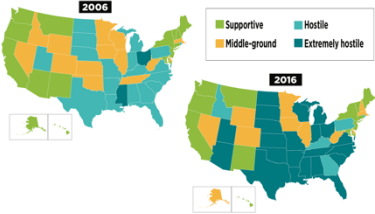
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APPENDICES


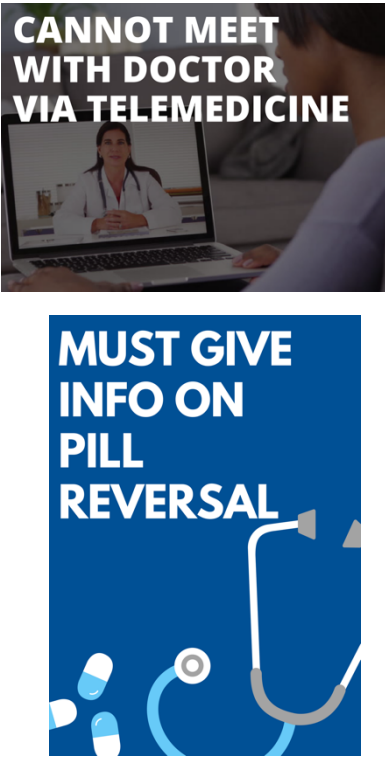
Appendix A: Video Script Content Tables

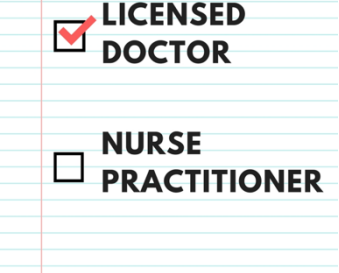

Cognitive (Knowledge) Portion



Wording of Video	Corresponding survey portion	Corresponding visual graphic	Citation for statement in wording of video	Evidence-based reasoning for shifting attitudes toward abortion with knowledge
<p>“News anchor” introduces self</p> <p>Hello, my name is Michelle. I am an educator at the University of Arkansas in the public policy program with a focus on reproductive health laws. Today I am going to talk about laws that restrict abortion in Arkansas.</p>	-	-	-	<p>Establishing credibility of the source influences an audience member’s digestion of the persuasive messages (Petty & Priester, 1994)</p> <p>Arkansas residents will be familiar with the University of Arkansas and specifying that she has training/education on RH laws makes her qualified to speak on this subject.</p>
<p>Abortion, which is when a pregnancy is ended so that it does not result in the birth of a child, has been legal in all 50 US states for over 40 years.</p>	<p>Based on what you know or have heard, is it currently legal for a woman to get an abortion in all 50</p>		<p>(Roe v Wade, 410 US 113, 1973)</p>	<p>Knowledge of abortion is low (Bessett et al., 2015; Kavanaugh, Bessett & Littman, 2013) which can lead to misperceptions of</p>



	states in the U.S./in Arkansas?			the safety of abortion. White and colleagues (2016) noted the impact of misperceptions of safety of abortion on support for abortion legislation. That is, those who are misinformed are more likely to support abortion legislation under the pretense that it makes abortion safer for women.
There are a few types of abortion- the most common two are Medication , which is a combination of pills that can only be taken up to 10 weeks of pregnancy and Aspiration , which involves a procedure using gentle suction, 92% of which take place before 13 weeks of pregnancy.	<ul style="list-style-type: none"> • There is more than one type of abortion. •Based on what you know or have heard, what is a medication/aspiration abortion? 		(Jerman, Jones, & Onda, 2016; Kulier et al., 2011)	
Even though abortion is legal in all 50 states, in recent years, states have passed many laws to restrict abortion. In the last 7 years, states passed 338 new abortion restrictions. Arkansas is in top three states with the newest laws restricting abortion access.	Based on what you know or have heard, is it easy for women to obtain an abortion in your state?		(Guttmacher Institute, 2016b; Nash et al., 2017)	Audiences value information with geographic proximity over news in distant locations (Devereux, 2007; Golding & Elliott, 1979; Wahl-Jorgensen & Hanitzsch, 2009)
To get an abortion in Arkansas, there are several rules that patients and doctors must follow ...	Based on what you know or have heard, which of the following laws regarding abortion apply to Arkansas?	-	-	Research indicates that knowledge of state-level legislation on abortion is low (Lara et al., 2015; White et al., 2016) and people have low awareness of their impact, believing

				<p>that laws make abortion safer (Weitz et al., 2008; White et al., 2016).</p> <p>Each statement includes what the law is and why its effect hinders the people who face them -- especially low- income individuals because they are the majority of abortion patients (75%; Jerman et al., 2016). These statements aim to 1) increase knowledge and 2) encourage audience members to start thinking about their effect on more vulnerable populations. However, they are not as pointed as the testimonial on empathy-induction.</p>
<p>If you're under 18, you have to get permission from a parent. Research shows it delays the procedure or teens may travel to states without these laws to get an abortion.</p>	<ul style="list-style-type: none"> •Minors must get their parents' permission before they can get an abortion 	 <p>Must have Parental Permission</p>	<p>(Blasdell, 2002; Bitler & Zavodny, 2001; Guttmacher Institute, 2017c)</p>	<p><i>Potential effect on vulnerable populations:</i> Barrier for minors (often who have limited resources or resources controlled by other people)</p>

<p>You have to go in for a required counseling session and then wait 48 hours before you can get an abortion, which means going into a clinic twice and increasing costs associated with travel and lodging.</p>	<p>•A woman must wait 48 hours after required counseling before the abortion can be performed</p>		<p>(Guttmacher Institute, 2017g; Joyce et al., 2009; Karasek, Roberts, & Weitz, 2016)</p>	<p><i>Potential effect on vulnerable populations:</i> Increasing costs for travel and lodging (especially burdensome for low-income individuals)</p>
<p>Sometimes, doctors use telemedicine to provide care for people who live far away from a clinic. This is a way to meet with a doctor over video conference so you don't have to travel to see the doctor in person. But in Arkansas, doctors aren't allowed to use telemedicine to provide the abortion pill, which means they must meet the doctor in person and...</p> <p>During the counseling session, doctors are required to tell patients that it is possible for a medication abortion to be reversed after the first dose of pills, which is not backed up with medical evidence.</p>	<p>•Doctors may not prescribe the abortion pill through "telemedicine" (e.g., online video session)</p> <p>Before an abortion, doctors must tell women that it is possible for the abortion pill to be reversed*</p>		<p>(Guttmacher, 2017a; Jones & Kooistra, 2011)</p>	<p><i>Potential effect on vulnerable populations:</i> Increase travel and cost for people who live far from a clinic (especially low-income individuals who live in rural areas) & misinformation to women from people they trust</p> <p>Almost half (46%) of over 1000 voters across the country reported they did <i>not</i> think there was a law that would make doctors give medically inaccurate information (PerryUndum, 2016)</p>

<p>So in order to get an abortion, you must go to the facility at least twice and the abortion has to be performed by a licensed doctor, which means if you usually go to a health professional like a nurse practitioner, you have to go to a different place.</p>	<p>•Abortions must be performed by a licensed doctor</p>		<p>(Grumbach, Hart, Mertz, Coffman, & Palazzo, 2003; Schacht, 2008; Taylor et al., 2009; Weitz et al., 2013)</p>	<p><i>Potential effect on vulnerable populations:</i> Displace individuals who do not normally go to physicians (especially low-income and women of color, as they are more likely to be cared for by NPs and PAs in public health departments or community health centers (Taylor et al., 2009; Weitz et al., 2013))</p>
<p>In Arkansas, if you are 20 weeks pregnant or later, you cannot get an abortion unless your life is endangered or were a victim of rape or incest.</p>	<p>•A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is endangered</p>		<p>(Guttmacher Institute, 2017j)</p>	<p><i>Potential effect on vulnerable populations:</i> “Nearly 99 percent of abortions occur before 21 weeks, but when they are needed later in pregnancy, it’s often in very complex circumstances” (Planned Parenthood, 2018). Prohibition after 20 weeks ignores complex circumstances of those who are likely vulnerable.</p>

<p>The safest and most common procedure for abortion after 20 weeks, called dilation and extraction, is not allowed in Arkansas. You may have heard people call this a “partial birth” abortion but that is not a medical term or an actual procedure.</p>	<ul style="list-style-type: none"> •A woman cannot get a “Partial-birth” abortion •A woman cannot get a dilation and extraction abortion which is often performed after the 20th week of pregnancy 		<p>(di Mauro & Joffe, 2007; Guttmacher Institute, 2017j)</p>	<p>We differentiate between the two terms to see if support differs based on language.</p> <p>In large national polls, 60-70% of the samples reported they thought “partial birth” abortions should be banned, but only 45-50% reported support for “bans at 20 weeks” (Bowman & Sims, 2017)</p>
<p>If you are approved to get an abortion after 20 weeks in Arkansas, doctors are required to give you information about pain the fetus might feel in a counseling session. Other states require doctors to talk about about the link between abortion and breast cancer or negative mental health outcomes. None of this information is evidenced by medical research.</p>	<ul style="list-style-type: none"> •Required counseling before the abortion must include information on alleged fetal pain (to women who are at least 20 weeks pregnant) 		<p>(Vandewalker, 2012)</p>	<p><i>Potential effect on vulnerable populations:</i> Misinformation to women from people they trust (physicians)</p> <p>Almost half (46%) of over 1000 voters across the country reported they did <i>not</i> think there was a law that would make doctors give medically inaccurate information (PerryUndum, 2016)</p>

<p>Lastly, Medicaid (state insurance for low-income people) will not cover abortion in Arkansas unless your life is endangered or were a victim of rape or incest. This limits reproductive options for women who are poor.</p>	<p>•Public funding such as Medicaid can only cover abortions in cases of the woman’s life is endangered, rape and incest</p>		<p>(Bitler & Zavodny, 2001; Guttmacher Institute, 2017d; Nash et al., 2017; Roberts et al., 2014)</p>	<p><i>Potential effect on vulnerable populations:</i> Directly impacts low-income women</p>
<p>Because of these restrictions, many places that offered abortion services have closed. Now there are only 4 clinics in 2 cities in the state that can offer abortion services to the 1 million women that live in Arkansas.</p>	<p>Based on what you know or have heard, is it easy for women to obtain an abortion in your state?</p>		<p>(Jones & Jerman, 2017a; United States Census Bureau, 2016)</p>	<p>Ends on note of scarcity for people in Arkansas</p>

Affective (Testimonial) Portion

<p>Intro by news anchor</p>	<p>States have passed these laws with the reasoning they are making it safer for women. But these laws don't actually improve safety, they only make it harder for women who seek an abortion to get one, which can delay getting care, and cost more time and money.</p> <p>The largest group of women who get abortions in the US are in their 20's and low-income like Mia, who is here to tell us a personal story about her experience with these Arkansas laws.</p>	<p>Weitz and colleagues (2008) comment that some people report being in favor of certain laws because they believe they benefit women's health (e.g., lessens the harm of abortion on women's mental health outcomes). This statement clarifies that there are outcomes that are not related to safety.</p> <p>Sharing stories and hearing others' perspectives have been effective in creating empathy (LeBaron & Carstaphen, 1997)</p> <p>The testimonials actually specify common abortion patient demographics (Jerman et al., 2016) unlike the knowledge portion, which only implies who may be vulnerable populations. The story told by the testimonial woman reinforces what the audience is told about laws in Arkansas (e.g., they increase costs, make it more difficult- especially for vulnerable populations).</p> <p>The words of the testimonial are similar. The phrases that are the same are meant to build empathy for this individual, especially indicating that she is low-income. The phrases that are different (in bold) by pregnancy circumstance, are meant to build more empathy for the rape victim and use the consensual sex condition as a foil (contrasts with and emphasizes and enhances the qualities of another).</p>
<p>Rape</p>	<p>Consensual</p>	<p>Evidence-based reasoning for building an empathetic character</p>
<p>Last year, I was raped. I was coming out of work and someone attacked me the parking lot. I didn't know the guy and I didn't</p>	<p>Last year, I became pregnant. I didn't really know the guy and I</p>	<p>The rape condition is more empathetic because it was a "stranger attack," and implies she had a lack of control over the pregnancy (Hans & Kimberly, 2014)</p>

<p>tell anyone about it for a long time.</p>	<p>didn't tell anyone about it for a long time.</p>	<p>Majority of people support abortion in cases of rape (Mikoajczak & Bilewicz, 2015; Smith & Son, 2013). People have empathy for rape victims, especially if they know someone who has been raped (Wiener, Felman Wiener, & Grisso, 1989)</p> <p>We posit people will assume consensual sex was under the control and blame the woman for the pregnancy and have less empathy for her (Hans & Kimberly, 2014)</p> <p>Not knowing the guy prevents the audience from assuming it could be a partner or friend and not telling anyone implies she felt shame or embarrassment and did not feel positive about the pregnancy.</p>
<p>By the time I found out I was pregnant, I was about 8 weeks along. You count from the first day of your last period so by the time you find out you've missed a period, you're already 4-5 weeks pregnant. I rarely get my period on time so I didn't even know I was pregnant until I took a test around 8 weeks.</p>	<p>By the time I found out I was pregnant, I was about 8 weeks along. You count from the first day of your last period so by the time you find out you've missed a period, you're already 4-5 weeks pregnant. I rarely get my period on time so I didn't even know I was pregnant until I took a test around 8 weeks.</p>	<p>Meant to get the audience to realize that some people do not know they are pregnant right away and to target the misconception that women wait until the last minute to change their minds about the pregnancy. Increase empathy by implying this is something (gestation) that is happening to her without her knowledge.</p> <p>Also, to increase empathy for this woman, it implies she had an abortion earlier in the pregnancy and more people support an earlier abortion than a later abortion (Ludlow, 2008; Norris et al., 2011)</p>
<p>I live paycheck to paycheck. I can barely make rent and groceries. I knew I didn't have the money to support a baby as well.</p>	<p>I live paycheck to paycheck. I can barely make rent and groceries. I knew I didn't have the money to support a baby as well.</p>	<p>Increase empathy by indicating she is low-income and comparing price of abortion to total price of supporting a baby/child</p>

I also knew I definitely did not want to have the baby of the person who raped me.		Increase empathy for rape victim
My insurance wouldn't cover me because I didn't report the rape. I didn't want people to know.	My insurance wouldn't cover it.	Increase empathy for low-income individuals because Medicaid will not cover abortion but further empathy for rape victim because even though there is an exception for rape, she does not want to tell anyone.
It was about \$500. I had to use all the money in my bank account. By the time I got the money together and asked about an appointment, I was almost 9 weeks pregnant. I live in the middle of nowhere so the closest clinic is 3 hours away. I had to take off work, and ask a friend for money for the bus ride to the doctor.	It was about \$500. I had to use all the money in my bank account. By the time I got the money together and asked about an appointment, I was almost 9 weeks pregnant. I live in the middle of nowhere so the closest clinic is 3 hours away. I had to take off work, and ask a friend for money for the bus ride to the doctor.	Increase empathy for low-income women by informing audience about actual cost of procedure (Roberts et al., 2014) and detailing steps taken in order to make this experience feasible.
But then they make you wait 48 hours to get it done which means I had to take two more days off work. I had nothing left to even get a hotel so I slept in the bus station.	But then they make you wait 48 hours to get it done which means I had to take two more days off work. I had nothing left to even get a hotel so I slept in the bus station.	Increase empathy for low-income women by reiterating cost and effect of 48 waiting period With increased knowledge, one can better take a person's perspective and even change attitudes (Currier & Carlson, 2009). Plumm and Terrance (2008) state that in order to take another person's perspective, one must also learn about the "contextual and structural constraints" that contribute to that person's perspective (p. 189).
I was sure of my decision and just wanted to get this taken care of as soon as possible, in the safest way	I was sure of my decision and just wanted to get this taken care of as soon as possible, in the safest way	Increase empathy for low-income women who have to follow these rules to get the care they need

<p>possible. But these laws made everything go so much slower and so much more expensive because I had to take time from work and stay extra days.</p>	<p>possible. But these laws made everything go so much slower and so much more expensive because I had to take time from work and stay extra days.</p>	
<p>I don't regret the abortion. I felt relieved. I just wanted to put the rape behind me.</p>	<p>I don't regret the abortion. I felt relieved. It wasn't the right time.</p>	<p>Most common psychological outcome is relief (Bradshaw & Slade, 2003)</p> <p>Increase empathy for rape victim by reiterating that the pregnancy was out of her control</p>

Appendix B: IRB Approval Letter



Office of Research Compliance
Institutional Review Board

September 11, 2017

MEMORANDUM

TO: Mary Hunt
Kristen Jozkowski

FROM: Ro Windwalker
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 17-08-055

Protocol Title: *Abortion Attitudes and Empathy Pilot Survey*

Review Type: EXEMPT

Approval Date: 09/08/2017

Your protocol has been approved by the IRB. We will no longer be requiring continuing reviews for exempt protocols.

If you wish to make any modifications in the approved protocol that may affect the level of risk to your participants, you must seek approval prior to implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or irb@uark.edu.

Appendix C: Online Survey Materials

PART A: Survey Introductory Page

Welcome to the Study!

Thank you for clicking through to our survey!

Before deciding whether or not to participate, please read more about the nature of this study.

If I Decide to Participate, What Will be Expected of Me?

This study is open to anyone who is over the age of 18 and lives in Arkansas. Those who decide to participate in this study will be asked to complete an online survey about attitudes toward abortion.

In just a moment, we will ask you to read the study consent form. If after reading this consent form you agree to participate in the study, you will be asked to click through to the survey. This survey should take 30 minutes to complete. All information collected will be kept confidential to the extent allowed by law and University policy.

PART B: Informed Consent Page

INFORMED CONSENT STATEMENT
Mary E. Hunt MS & Kristen N. Jozkowski PhD
University of Arkansas

INVITATION TO PARTICIPATE:

You are invited to participate in a research study about your attitudes toward abortion. You are being asked to participate because you are aged 18 or older and live in Arkansas.

Who are the researchers?

Mary E. Hunt, MS
Department of Health, Human Performance, and Recreation
University of Arkansas
Email: sexstudy@uark.edu

Kristen N. Jozkowski, PhD
Department of Health, Human Performance, and Recreation
University of Arkansas
Email: sexstudy@uark.edu

Who will participate in this study?

If you participate in this study, you will be one of approximately 450 individuals participating in the study. You must be at least 18 years old to participate and currently live in Arkansas.

What am I being asked to do?

Your participation will require the following: provide thoughtful answers to an online survey and watch a short video clip.

What are the possible risks or discomforts?

There are no anticipated risks for participating in this study. If you feel uncomfortable at any time while completing the survey, you can leave a question unanswered or can end your involvement in the study.

What are the possible benefits of the study?

You may benefit from self-awareness from your responses and you will be contributing to increasing the body of knowledge about attitudes toward abortion. Additionally, you may enter your email address to receive a gift card.

How long will the study last?

This survey should take about 30 minutes to complete (a 15-20 minute pre-test, a short video clip, a 5-10 minute post-test).

Will I have to pay for anything?

No, there will be no cost associated with your participation.

What are the options if I do not want to be in the study?

Participation is completely voluntary. If you do not want to be in this study, you may refuse to participate; you can stop the survey at any time if you do not wish to participate.

How will my confidentiality be protected?

All information will be kept confidential to the extent allowed by applicable State and Federal law. Your responses will be anonymous.

Will I know the results of the study?

At the conclusion of the study, you will have the right to request feedback about the results. You may contact the principle researcher, Mary Hunt at sexstudy@uark.edu.

You may also contact the University of Arkansas Research Compliance office listed below if you have questions about your rights as a participant, or to discuss any concerns about, or problems with the research.

The University of Arkansas Research Compliance:

Ro Windwalker, CIP
Institutional Review Board Coordinator
Research Compliance
University of Arkansas
109 MLKG Building
Fayetteville, AR 72701
(479) 575-2208
irb@uark.edu

I have read the above statement and I understand the purpose of the study as well as the potential benefits and risks that are involved. I understand that participation is voluntary. I understand that significant new findings developed during this research can be shared with the participant. I understand that no rights have been waived by consenting to participate in this study. By clicking to the next page and filling out the survey, I am implying my consent to participate in this study.

Appendix D: Survey Instrument

PRE-TEST

Directions: Please select the response choice that most accurately describes you. Please answer honestly and completely.

- What is your age in years (e.g., 25)?
- Are you a current resident of Arkansas?
 - Yes
 - No
- Is English your native language?
 - Yes
 - No

*Follow up if No is chosen: did you attend school where English was the primary language from K-12?

- Yes
- No

**If below 18, not a current Arkansas resident, or English is not primary language in formative years, participant will be thanked for their interest and directed to the end of the survey because of eligibility requirements.*

Directions: Please answer the fill in the blank questions below.

Please use the directions below to make an unidentifiable code. This code is purely to help track your data over the entire survey.

The code entails:

1. The first 4 digits of your phone number
2. The first 2 letters of your name
3. The 2 digits of your birth month

For example, if your phone number is 776-5577, your name is Carl, and your birth month is June (06), then your code would be: “5577Ca06”.

- What is your current zip code (e.g., 72701)?
- What is the zip code of the area where you grew up (i.e., your “hometown”)?
- How long have you lived in Arkansas in years rounded to the nearest year (e.g., 1 year, 6 years, 30 years)? If less than 1 year, specify how many months (e.g., 3 months).

Directions: Please select the response choice that most accurate describes you.

- Are you:
 - Male
 - Female
 - Other: please specify

- How would you describe your race/ethnicity?
 - Asian or Asian American
 - Black or African American
 - Latino/a
 - Middle Eastern or Middle Eastern American
 - Native American or American Indian
 - Pacific Islander or Alaskan Native
 - Bi- or Multi- racial
 - White or Caucasian
 - Other: Please specify

- What is your household income before taxes?
 - Less than \$16,000
 - \$16,001-\$42,000
 - \$42,001-68,000
 - \$68,001-94,000
 - More than \$94,000

- How would you describe your current relationship status?
 - Single and not dating
 - Single, but casually seeing someone/hanging out with someone
 - In a relationship
 - Married
 - Divorced
 - Widowed
 - Other: please specify

- What is the highest level of education you have completed?
 - Less than high school
 - High school graduate/GED
 - Some college/associate degree
 - College graduate
 - Graduate degree

- Are you currently employed at a paid job?
 - Yes, full time. What is your job?
 - Yes, part time. What is/are your job(s)?
 - No, full time student
 - No, full time homemaker/caregiver

- No, retired
- No, currently unemployed
- How would you describe your sexual orientation?
 - Heterosexual/straight
 - Homosexual/gay/lesbian
 - Bisexual
 - Unsure/questioning
 - Queer
 - Another orientation. Please specify
- How often do you attend religious services?
 - Once a week or more
 - 2-3 times per month
 - Once a month
 - A few times per year
 - Never
- How important is religion to you personally?
 - Very important
 - Somewhat important
 - Neither important nor unimportant
 - Not really important
 - Not at all important
- How would you describe your religious denomination (e.g., Christian-Catholicism, Christian-Protestantism, Islam, Judaism)?
- Have you or anyone you know experienced sexual assault?
 - Yes
 - No
 - I'm not sure

The next questions will ask about your political viewpoints:

- Generally, how would you describe your views on most *social* political issues (e.g., education, religious freedom, death penalty, gender issues, etc.)?
 - Strongly Liberal
 - Liberal
 - Moderate
 - Conservative
 - Strongly Conservative
 - These issues don't matter to me
- Generally, how would you describe your views on most *economic* political issues (e.g., minimum wage, taxes, welfare programs, etc.)?

- Strongly Liberal
 - Liberal
 - Moderate
 - Conservative
 - Strongly Conservative
 - These issues don't matter to me
- What political party do you most identify with?
 - Republican party
 - Democratic party
 - Libertarian party
 - Green party or Independent
 - Other. Please describe
 - I do not identify with a political party

The next few questions will ask about your feelings about abortion:

- In general, regarding abortion, which of the following do you most identify with?
 - Pro-Life
 - Pro-Choice
 - I do not identify with either
 - I identify with both
 - I don't know
- To what extent do you think it should be possible for a pregnant woman to obtain a legal abortion?
 - 1- It should definitely not be possible
 - 2-
 - 3-
 - 4-
 - 5-
 - 6- It should definitely be possible

Previous abortion experience

- Have you or anyone you know had an abortion?
 - Yes
 - No
 - I'm not sure

**Skip logic, if they answer "yes" or "I'm not sure," they will be directed to the following questions. If they answer "no," they will be directed to the next section*

- Who do you know that has had an abortion? Check all that apply.
 - Myself
 - My current partner
 - A previous partner
 - A friend or family member

- An acquaintance
- Where did the abortion take place? Check all that apply.
 - A health care facility or clinic
 - At home (after an abortion pill had been prescribed by a health care professional)
 - At home (by doing something without speaking to a health care professional)
 - I don't know
 - Other. Please specify
- In regard to the abortion(s) from the previous questions, how do you know about it/them? Check all that apply.
 - I was there (I was the one getting an abortion)
 - I was there (I went with the person)
 - They told me
 - I suspect they have but they never told me
 - Other. Please specify

Voting behaviors

- Are you registered to vote?
 - Yes
 - No
 - I cannot vote in America
- Would you say you follow what's going on in government and public affairs?
 - Most of the time
 - Some of the time
 - Only now and then
 - Hardly at all
- Where do you get your information on current events from?
 - Television: please specify programs
 - Online: please specify websites
 - Print media: please specify
 - Radio or podcasts: please specify
 - Other: please specify
- How would you describe the media sources you listed in the previous question?
 - Strongly Liberal
 - Liberal
 - Moderate
 - Conservative
 - Strongly Conservative
- How often would you say you vote in Arkansas state elections?
 - Always

- Nearly always
 - Part of the time
 - Seldom
 - Never
- How likely are you to vote in the next Arkansas state elections (e.g., state representatives, governor)?
 - Definitely will vote
 - Probably will vote
 - Probably will not vote
 - Definitely will not vote
 - In making your decision about who to vote for in the next election, will the issue of abortion be...
 - Very important
 - Somewhat important
 - Not too important
 - Not at all important
 - Thinking about how certain issues might affect your vote for Arkansas state positions such as representatives or governor, would you say a candidate's position on abortion would be...
 - The single most important factor in your vote
 - Very important but not the most important factor
 - One of many factors you'll consider
 - Not an important factor in your vote
 - If you agreed with an Arkansas state representative or governor on other issues, but not on the issue of abortion, do you think you could still vote for that candidate?
 - Yes
 - No
 - Do you think abortion is...
 - A critical issue facing the country
 - One among many important issues
 - Not that important compared to other issues

Why? (open-ended)

(SDO₇ Scale: Personal beliefs about status/power (Ho et al., 2015))

Show how much you favor or oppose each idea below by selecting a number from 1 to 7 on the scale below. You can work quickly; your first feeling is generally best.

- 1: Strongly Oppose
- 2: Somewhat Oppose

- 3: Slightly Oppose
- 4: Neutral
- 5: Slightly Favor
- 6: Somewhat Favor
- 7: Strongly Favor

1. Some groups of people must be kept in their place.
2. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
3. An ideal society requires some groups to be on top and others to be on the bottom.
4. Some groups of people are simply inferior to other groups.
5. Groups at the bottom are just as deserving as groups at the top.
6. No one group should dominate in society.
7. Groups at the bottom should not have to stay in their place.
8. Group dominance is a poor principle.
9. We should not push for group equality.
10. We shouldn't try to guarantee that every group has the same quality of life.
11. It is unjust to try to make groups equal.
12. Group equality should not be our primary goal.
13. We should work to give all groups an equal chance to succeed.
14. We should do what we can to equalize conditions for different groups.
15. No matter how much effort it takes, we ought to strive to ensure that all groups have the same chance in life.
16. Group equality should be our ideal.

(INTERPERSONAL REACTIVITY INDEX (Davis, 1980))

The following statements ask about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number 1-5.. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can.

ANSWER SCALE: 1 (Does not describe me well) 2 3 4 5 (describes me very well)

1. I often have tender, concerned feelings for people less fortunate than me.
2. I sometimes find it difficult to see things from the "other guy's" point of view.
3. Sometimes I don't feel very sorry for other people when they are having problems.
4. I try to look at everybody's side of a disagreement before I make a decision.
5. When I see someone being taken advantage of, I feel kind of protective towards them.
6. I sometimes try to understand my friends better by imagining how things look from their perspective.
7. Other people's misfortunes do not usually disturb me a great deal.
8. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
9. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

15. Please select "3"

10. I am often quite touched by things that I see happen.
11. I believe that there are two sides to every question and try to look at them both.
12. I would describe myself as a pretty soft-hearted person.
13. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
14. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

(Attitudes and knowledge about Arkansas abortion restrictions)

- Based on what you know or have heard, is it currently **legal** for a woman to get an abortion in all 50 states in the U.S.?
 - Yes, abortion is legal in all 50 states
 - No, abortion is not legal in all 50 states (legal in some but not others)
 - No, abortion is not legal in any of the 50 states
 - I'm not sure
- Based on what you know or have heard, is it currently **legal** for a woman to get an abortion in Arkansas?
 - Yes, abortion is legal
 - No, abortion is not legal
 - I'm not sure
- Based on what you know or have heard, is it **easy** for women to obtain an abortion in Arkansas?
 - Yes, it is easy for a woman to get an abortion
 - No, it is not easy for a woman to get an abortion
 - I'm not sure
- Would you like to see abortion laws in this country...
 - Made more strict (would make abortion more difficult to obtain)
 - Made less strict (would make abortion less difficult to obtain)
 - Remain as they are
- Would you like to see abortion laws in Arkansas...
 - Made more strict (would make abortion more difficult to obtain)
 - Made less strict (would make abortion less difficult to obtain)
 - Remain as they are

Based on what you know or have heard, which of the following are current laws in Arkansas? (yes, current law in Arkansas/no, not a current law in Arkansas)

- Minors must get a parent's permission before they can get an abortion*
- Minors must tell a parent before they can get an abortion but they don't need permission.
- Before an abortion, doctors have to counsel that there may be a link between breast cancer and abortion
- For women having an abortion at 20 weeks of pregnancy or later, doctors have to counsel that that a fetus can feel pain *

- Before an abortion, doctors must tell women that the abortion can cause negative psychological effects
- A woman must wait a period of time after required counseling before the abortion can be performed:
 - 24 hours
 - 48 hours*
 - 72 hours
- A woman must get an ultrasound (a scan to produce a picture of the pregnancy) before an abortion
- Medicaid (insurance for people who are low-income) can *only* cover abortions in cases of the rape and incest or if the woman's life is in danger*
- Private health insurance companies (e.g., Blue Cross Blue Shield, United Healthcare) can require people to pay more or buy special insurance to cover abortion
- Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)*
- Doctors may not prescribe the abortion pill through *telemedicine* (e.g., online video session) for people who live far away*
- Before an abortion, doctors must tell women that it is possible for the abortion pill to be reversed*
- **Please select “No, not a current law in Arkansas”**
- Facilities that provide abortions have to adhere to *ambulatory surgical standards* (e.g., hallways have to be a certain width, requires extra nursing staff, has to be within a certain distance to a hospital)
- A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is in danger*
- A woman cannot get a “Partial-birth” abortion*
- A woman cannot get a dilation and extraction abortion which is often performed after the 20th week of pregnancy*

To what extent do you agree or disagree that this should be a law in Arkansas (1: strongly disagree to 5: strongly agree)?

“It should be a law in Arkansas that...”

- Minors must get a parent's permission before they can get an abortion*
- Minors must tell a parent before they can get an abortion but they don't need permission.
- Before an abortion, doctors have to counsel that there may be a link between breast cancer and abortion
- For women having an abortion at 20 weeks of pregnancy or later, doctors have to counsel that that a fetus can feel pain *
- Before an abortion, doctors must tell women that the abortion can cause negative psychological effects
- A woman must wait a period of time after required counseling before the abortion can be performed:
 - 24 hours
 - 48 hours*

- 72 hours
- A woman must get an ultrasound (a scan to produce a picture of the pregnancy) before an abortion
- Medicaid (insurance for people who are low-income) can *only* cover abortions in cases of the rape and incest or if the woman's life is in danger*
- Private health insurance companies (e.g., Blue Cross Blue Shield, United Healthcare) can require people to pay more or buy special insurance to cover abortion
- Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)*
- Doctors may not prescribe the abortion pill through *telemedicine* (e.g., online video session) for people who live far away*
- Before an abortion, doctors must tell women that it is possible for the abortion pill to be reversed*
- Facilities that provide abortions have to adhere to *ambulatory surgical standards* (e.g., hallways have to be a certain width, requires extra nursing staff, has to be within a certain distance to a hospital)
- A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is in danger*
- A woman cannot get a "Partial-birth" abortion*
- A woman cannot get a dilation and extraction abortion which is often performed after the 20th week of pregnancy*

(Attitudes toward stigmatized populations (based on Batson et al., 1997))

- For most women who seek abortions, it is their own fault that they got pregnant. (1 = strongly disagree, 9 = strongly agree)
- Most women who seek abortions could have avoided getting pregnant. (1 = strongly disagree, 9 = strongly agree)
- Our society does not do enough to help women who seek abortions (1 = strongly disagree, 9 = strongly agree)
- Women who seek abortions have no one to blame but themselves for getting pregnant. (1 = strongly disagree, 9 = strongly agree)
- Our society should do more to protect the welfare of women who seek abortions. (1 = strongly disagree, 9 = strongly agree)
- Anyone who seeks an abortion must be inhuman. (1 = strongly disagree, 9 = strongly agree)
- Anyone who seeks an abortion should be punished. (1 = strongly disagree, 9 = strongly agree)
- No one would seek an abortion unless she had a moral or mental deficiency. (1 = strongly disagree, 9 = strongly agree)
- Our society should do more to prevent women from getting pregnant when they do not want to get pregnant. (1 = strongly disagree, 9 = strongly agree)
- How much do you personally care about the well-being of women who seek abortions? (1 = not at all, 9 = very much)

- Compared with other health issues we face today, how would you rate the importance of helping women who seek abortions? (1 = not at all important, 9 = extremely important)
- In general, what are your feelings toward women who seek abortions? (1 = extremely negative, 9 = extremely positive)

(General Knowledge of abortion)

The following questions will ask about your general knowledge of abortion. If you do not know the answer, provide your best guess.

- Which has a greater health risk for a woman?
 - Having an abortion
 - Giving birth to a baby*
 - Both have the same risk
- What percentage of women in the United States will have had an abortion by the age of 45?
 - 48% of women
 - 24% of women*
 - 12% of women
 - 2% of women
- A woman who has an abortion is more likely to have breast cancer than if she were to continue the pregnancy.
 - True
 - False*
- A woman who has an abortion is more at risk of a serious mental health problem than if she were to continue the pregnancy.
 - True
 - False*
- A woman who has an abortion is more likely to have difficulty getting pregnant in the future.
 - True
 - False*
- There is more than one type of abortion.
 - True*
 - False
- How confident are you in your answers to the previous questions about general knowledge of abortion?
 - 1: Very confident
 - 2
 - 3
 - 4
 - 5: Not at all confident

BLOCK BREAK

- Based on what you know or have heard, what is a medication abortion?

- Based on what you know or have heard, what is an aspiration abortion?

The next few questions will ask about personal characteristics of women who most commonly obtain abortions:

- Women who most commonly obtain abortions are in what age group?
 - Younger than 20
 - 20-29*
 - 30-39
 - 40 or older
- Women who most commonly obtain abortions are of what race/ethnicity?
 - White*
 - Black
 - Hispanic
 - Asian/Pacific Islander
 - Other
- Women who most commonly obtain abortions have completed how much education?
 - Less than high school
 - High school graduate/GED
 - Some college/associate degree*
 - College graduate
 - Graduate degree
- Women who most commonly obtain abortions are at what income level?
 - Low-income*
 - Middle-income
 - High-income
- Women who most commonly obtain abortions are religiously affiliated.
 - True*
 - False
- Women who most commonly obtain abortions are of what relationship status?
 - Married
 - Cohabiting, not married
 - Never-married, not cohabiting*
 - Previously married, not cohabiting
- Women who most commonly obtain abortions were using a contraceptive method when they became pregnant.
 - True*
 - False
- Women who most commonly obtain abortions have given birth before.
 - True*
 - False

(Marlowe-Crowne Social Desirability Scale-Short Form (Ballard, 1992; Reynolds, 1982))

Listed below are a number of statements concerning personal attitudes and traits.

Read each item and decide whether the statement is true or false as it pertains to you. (Answer T/F)

1. It is sometimes hard for me to go on with my work if I am not encouraged
2. I sometimes feel resentful when I don't get my way
3. No matter who I'm talking to, I'm always a good listener
4. There have been occasions when I took advantage of someone
5. I'm always willing to admit it when I make a mistake
6. I sometimes try to get even rather than forgive and forget
7. I am always courteous, even to people who are disagreeable
8. I have never been irked when people expressed ideas very different from my own
9. There have been times when I was quite jealous of the good fortune of others
10. I am sometimes irritated by people who ask favors of me
11. I have never deliberately said something that hurt someone's feelings

(Video Administration)

You will now watch a short news story about abortion laws in Arkansas (~3-5 minutes). If you want to put on headphones so as not to disrupt others, please do so at this time. There will be **NO graphic images shown**.

POST-TEST (Control)

UNIQUE IDENTIFIER (only Follow-up Post test 2)

Please use the directions below to make an unidentifiable code. This code is purely to help track your data over the entire survey.

The code entails:

1. The first 4 digits of your phone number
2. The first 2 letters of your name
3. The 2 digits of your birth month

For example, if your phone number is 776-5577, your name is Carl, and your birth month is June (06), then your code would be: “5577Ca06”.

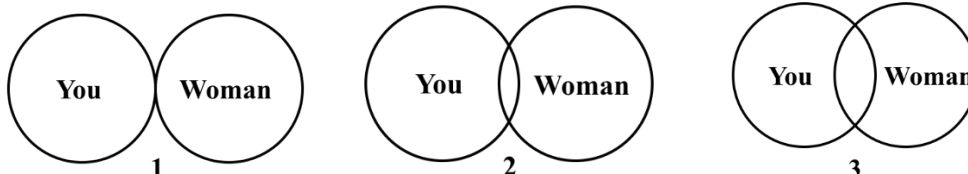
After hearing the news story, to what extent did you experience feeling: (POST TEST 1)

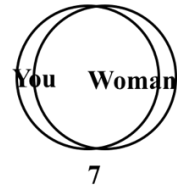
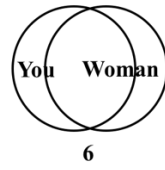
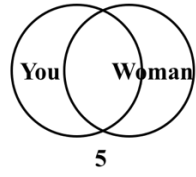
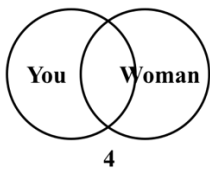
A few weeks ago, you watched a news story about abortion laws in Arkansas. When thinking about this video clip, what are your current feelings? (POST TEST 2)

- Sympathetic (1 = not at all, 7 = very much)
- Moved (1 = not at all, 7 = very much)
- Compassionate (1 = not at all, 7 = very much)
- Tender (1 = not at all, 7 = very much)
- Warm (1 = not at all, 7 = very much)
- Soft-hearted (1 = not at all, 7 = very much)

What aspect of the video caused you to feel the way you did while watching it?

Which picture best describes how you feel about yourself (self) in relation to **a woman who has had an abortion** (other)?





Why do you feel that way about a woman who has had an abortion?

POST-TEST (Intervention only)

UNIQUE IDENTIFIER (only Follow-up Post test 2)

Please use the directions below to make an unidentifiable code. This code is purely to help track your data over the entire survey.

The code entails:

1. The first 4 digits of your phone number
2. The first 2 letters of your name
3. The 2 digits of your birth month

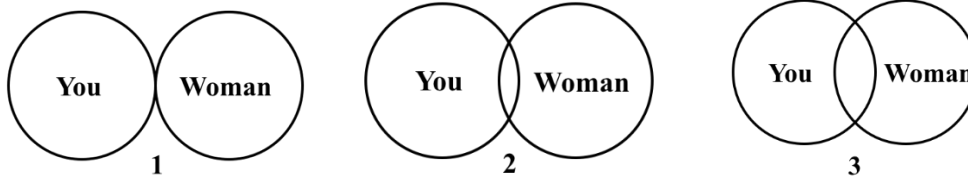
For example, if your phone number is 776-5577, your name is Carl, and your birth month is June (06), then your code would be: “5577Ca06”.

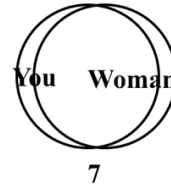
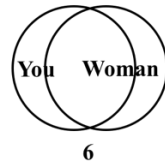
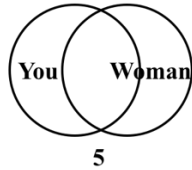
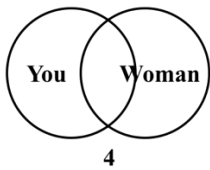
A few weeks ago, you watched a news story about abortion laws in Arkansas. When thinking about this video clip, what are your current feelings? (POST TEST 2)

- Sympathetic (1 = not at all, 7 = very much)
- Moved (1 = not at all, 7 = very much)
- Compassionate (1 = not at all, 7 = very much)
- Tender (1 = not at all, 7 = very much)
- Warm (1 = not at all, 7 = very much)
- Soft-hearted (1 = not at all, 7 = very much)

What aspect of the video caused you to feel the way you did while watching it?

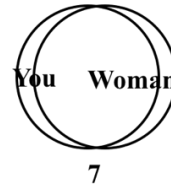
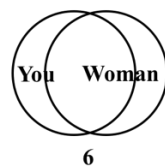
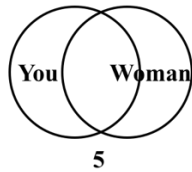
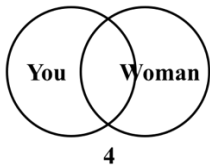
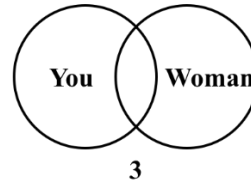
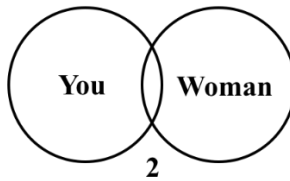
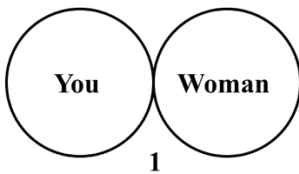
Which picture best describes how you feel about yourself in relation to **a woman who has had an abortion**?





Why do you feel that way about a woman who has had an abortion?

Which picture best describes how you feel about yourself in relation to **the woman you watched in the video who told her story about seeking an abortion?**



Why do you feel that way about the woman told her story about seeking an abortion?

POST-TEST CONTINUED (Control and Intervention)

Abortion Knowledge

- Based on what you heard in the video you watched, is it currently legal for a woman to get an abortion in all 50 states in the U.S.?
 - Yes, abortion is legal in all 50 states
 - No, abortion is not legal in all 50 states (legal in some but not others)
 - No, abortion is not legal in any of the 50 states
 - I'm not sure

- Based on what you heard in the video you watched, is it currently legal for a woman to get an abortion in Arkansas?
 - Yes, abortion is legal
 - No, abortion is not legal
 - I'm not sure

- Based on what you heard in the video you watched, is it easy for women to obtain an abortion in Arkansas?
 - Yes, it is easy for a woman to get an abortion
 - No, it is not easy for a woman to get an abortion
 - I'm not sure

- After watching the video, would you like to see abortion laws in this country...
 - Made more strict (would make abortion more difficult to obtain)
 - Made less strict (would make abortion less difficult to obtain)
 - Remain as they are

- After watching the video, would you like to see abortion laws in Arkansas...
 - Made more strict (would make abortion more difficult to obtain)
 - Made less strict (would make abortion less difficult to obtain)
 - Remain as they are

Based on what you heard in the video you watched, which of the following is a current law in Arkansas? (yes, current law in Arkansas/no, not a current law in Arkansas)

- Minors must get a parent's permission before they can get an abortion*
- Minors must tell a parent before they can get an abortion but they don't need permission.
- Before an abortion, doctors have to counsel that there may be a link between breast cancer and abortion
- For women having an abortion at 20 weeks of pregnancy or later, doctors have to counsel that that a fetus can feel pain *
- Before an abortion, doctors must tell women that the abortion can cause negative psychological effects
- A woman must wait a period of time after required counseling before the abortion can be performed:
 - 24 hours

- 48 hours*
- 72 hours
- A woman must get an ultrasound (a scan to produce a picture of the pregnancy) before an abortion
- Medicaid (insurance for people who are low-income) can *only* cover abortions in cases of the rape and incest or if the woman's life is in danger*
- Private health insurance companies (e.g., Blue Cross Blue Shield, United Healthcare) can require people to pay more or buy special insurance to cover abortion
- Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)*
- Doctors may not prescribe the abortion pill through *telemedicine* (e.g., online video session) for people who live far away*
- Before an abortion, doctors must tell women that it is possible for the abortion pill to be reversed*
- **Please select “No, not a current law in Arkansas”**
- Facilities that provide abortions have to adhere to *ambulatory surgical standards* (e.g., hallways have to be a certain width, requires extra nursing staff, has to be within a certain distance to a hospital)
- A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is in danger*
- A woman cannot get a “Partial-birth” abortion*
- A woman cannot get a dilation and extraction abortion which is often performed after the 20th week of pregnancy*

After watching the video, to what extent do you agree or disagree that this should be a law in Arkansas (1: strongly disagree to 5: strongly agree)?

“It should be a law that...”

- Minors must get a parent's permission before they can get an abortion*
- Minors must tell a parent before they can get an abortion but they don't need permission.
- Before an abortion, doctors have to counsel that there may be a link between breast cancer and abortion
- For women having an abortion at 20 weeks of pregnancy or later, doctors have to counsel that that a fetus can feel pain *
- Before an abortion, doctors must tell women that the abortion can cause negative psychological effects
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 - 72 hours
- A woman must get an ultrasound (a scan to produce a picture of the pregnancy) before an abortion
- Medicaid (insurance for people who are low-income) can *only* cover abortions in cases of the rape and incest or if the woman's life is in danger*

- Private health insurance companies (e.g., Blue Cross Blue Shield, United Healthcare) can require people to pay more or buy special insurance to cover abortion
- Abortions have to be administered by a licensed doctor (not a nurse or other healthcare provider)*
- Doctors may not prescribe the abortion pill through *telemedicine* (e.g., online video session) for people who live far away*
- Before an abortion, doctors must tell women that it is possible for the abortion pill to be reversed*
- Facilities that provide abortions have to adhere to *ambulatory surgical standards* (e.g., hallways have to be a certain width, requires extra nursing staff, has to be within a certain distance to a hospital)
- A woman cannot get an abortion after 20 weeks of pregnancy unless her life or health is in danger*
- A woman cannot get a “Partial-birth” abortion*
- A woman cannot get a dilation and extraction abortion which is often performed after the 20th week of pregnancy*

(Attitudes toward stigmatized populations (based on Batson et al., 1997))

- For most women who seek abortions, it is their own fault that they got pregnant. (1 = strongly disagree, 9 = strongly agree)
- Most women who seek abortions could have avoided getting pregnant. (1 = strongly disagree, 9 = strongly agree)
- Our society does not do enough to help women who seek abortions (1 = strongly disagree, 9 = strongly agree)
- Women who seek abortions have no one to blame but themselves for getting pregnant. (1 = strongly disagree, 9 = strongly agree)
- Our society should do more to protect the welfare of women who seek abortions. (1 = strongly disagree, 9 = strongly agree)
- Anyone who seeks an abortion must be inhuman. (1 = strongly disagree, 9 = strongly agree)
- Anyone who seeks an abortion should be punished. (1 = strongly disagree, 9 = strongly agree)
- No one would seek an abortion unless she had a moral or mental deficiency. (1 = strongly disagree, 9 = strongly agree)
- Our society should do more to prevent women from getting pregnant when they do not want to get pregnant. (1 = strongly disagree, 9 = strongly agree)
- How much do you personally care about the well-being of women who seek abortions? (1 = not at all, 9 = very much)
- Compared with other health issues we face today, how would you rate the importance of helping women who seek abortions? (1 = not at all important, 9 = extremely important)
- In general, what are your feelings toward women who seek abortions? (1 = extremely negative, 9 = extremely positive)

Voting

- After watching the video, how likely are you to vote in the next Arkansas state elections (e.g., state representatives, governor)?
 - Definitely will vote
 - Probably will vote
 - Probably will not vote
 - Definitely will not vote
- After watching the video, in making your decision about who to vote for in the next election, will the issue of abortion be...
 - Very important
 - Somewhat important
 - Not too important
 - Not at all important
- After watching the video, thinking about how certain issues might affect your vote for Arkansas state positions such as representatives or governor, would you say a candidate's position on abortion would be...
 - The single most important factor in your vote
 - Very important but not the most important factor
 - One of many factors you'll consider
 - Not an important factor in your vote
- After watching the video, if you agreed with an Arkansas state representative or governor on other issues, but not on the issue of abortion, do you think you could still vote for that candidate?
 - Yes
 - No
- After watching the video, do you think abortion is...
 - A critical issue facing the country
 - One among many important issues
 - Not that important compared to other issues

Why? (open-ended)

- There is more than one type of abortion.
 - True*
 - False

Finally, the next few questions will ask about your feelings about abortion:

- In general, regarding abortion, which of the following do you most identify with??
 - Pro-Life
 - Pro-Choice
 - I do not identify with either

- I identify with both
- I don't know
- To what extent do you think it should be possible for a pregnant woman to obtain a legal abortion?
 - 1-It should definitely not be possible
 - 2-
 - 3-
 - 4-
 - 5-
 - 6- It should definitely be possible
- Based on what you know or have heard in the video you watched, what is a medication abortion?
- Based on what you know or have heard in the video you watched, what is a surgical abortion?
- How would you describe the news video you watched?
 - Strongly Liberal
 - Liberal
 - Moderate
 - Conservative
 - Strongly Conservative

Think back to the video you watched and evaluate what you thought of the person who gave the news story, Michelle.



In your opinion, was she:

(Source Credibility Scale (Ohanian, 1990) (9 point scales))

Attractiveness

Attractive – Unattractive

Classy – Not classy

Beautiful – Ugly

Elegant – Plain

Sexy – Not sexy

Trustworthiness

Dependable – Undependable

Honest – Dishonest

Reliable – Unreliable

Sincere – Insincere

Trustworthy- Untrustworthy

Expertise

Expert – Not an Expert

Experienced – Inexperienced

Knowledgeable – Unknowledgeable

Qualified – Unqualified

Skilled – Unskilled

Evaluate what you thought of the woman who told her story about seeking an abortion, Mia.

(Intervention 1 & 2)



(Intervention 3 & 4)



In your opinion, was she:

Attractiveness

Attractive – Unattractive

Classy – Not classy

Beautiful – Ugly

Elegant – Plain

Sexy – Not sexy

Trustworthiness

Dependable – Undependable

Honest – Dishonest

Reliable – Unreliable

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Trustworthy- Untrustworthy

Expertise

Expert – Not an Expert

Experienced – Inexperienced

Knowledgeable – Unknowledgeable

Qualified – Unqualified

Skilled – Unskilled

Did you personally know any of the women in the video?

- a. No
- b. Yes, please describe

In the 2 weeks between watching the video and now, did you seek any media or resources that provided you with additional information on abortion, abortion laws, or related topics?

- a. No
- b. Yes-- please describe
- c. I'm not sure

In the 2 weeks between watching the video and now, did you or anyone you know seek an abortion?

- d. No
- e. Yes
- f. I'm not sure

Thank you for your responses!

Please enter the email where you wish to receive an Amazon e-gift card. The first 450 people who completed the survey will receive a \$10 gift card.

In 2 weeks, you will be sent a follow-up survey for an additional \$10 Amazon e-gift card.

Reminder: Your email address will be used so that we can send you the gift card and to contact you for one follow-up survey in 2 weeks. After that time, you will get a second gift card for participation in the follow-up survey. After that, your email will be deleted permanently.