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PREDICTORS OF MEDICAL STUDENTS' ATTITUDES TOWARDS ABORTION AND
THEIR CHANGES OVERTIME

by

Rebecca Elizabeth Morales
B.S. August 2016, Old Dominion University

A Thesis Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
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ABSTRACT

PREDICTORS OF MEDICAL STUDENTS' ATTITUDES TOWARDS ABORTION AND THEIR CHANGES OVERTIME

Rebecca Elizabeth Morales
Old Dominion University, 2018
Director: Dr. Kathleen Slauson-Blevins

As new legislation is regularly being introduced to minimize *Roe v. Wade*'s protection of women's right to choose in a medical setting, it is imperative to study what predictors may have an impact on abortion attitudes within the demographic of medical students, as well as how these predictors impact one's willingness to provide the service in the future. The current study then, uses data collected in 2000 and 2015 from a medical school located in Virginia, and in collaboration with a research university in the state to examine what factors are associated with a willingness to provide an abortion, as well as how these predictors have changed over a 15-year period. The findings of this study suggest that strength of one's religious belief is a consistent predictor of abortion attitudes and willingness to provide.

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CHAPTER I

INTRODUCTION

Abortion is a highly controversial topic in the United States today, however, the way in which we view abortion is socially constructed and changes based on the social context. While abortion is currently stigmatized as something morally wrong and shameful, this was not always the case (Kumar et al. 2009, Ravitz 2016). Abortion was a legal, uncontroversial, and common occurrence in American society prior to the mid-1800s, to which even the Catholic Church did not object (Ravitz 2016). When the war on abortion began in the late 1850s, the anti-abortion battalion was not led by religious conservatives, but by the American Medical Association (AMA). It has been argued that the AMA's assault on legal abortion was ultimately an effort to suppress the power of women in several ways (Our Bodies Ourselves Abortion Contributors 2014, Ravitz 2016, Saurette and Gordon 2015). Pursuing and maintaining power in and control over medical practice as well as the suppression of competition, including midwives who were/are predominantly women, were some of the motivations of physicians gunning for abortion restriction. Furthermore, it has been suggested that this pursuit of abortion restriction by the male-dominated AMA was a reaction to women lobbying for the right to attend Harvard Medical School, where many of them hoped to study gynecology and obstetrics (Ob/Gyn) (Ravitz 2016, Reagan 1996).

The modern "pro-life" or "anti-abortion" movement frequently frames abortion as morally objectionable and as something that is harmful not only to a fetus, but also to women, resulting in supposed negative consequences such as psychological distress, depression, and has even been tied to infertility (Kumar et al. 2009, D.R. Grimes 2015). However, at the time of its

passage, religious organizations often did not object to *Roe v. Wade*. For example, in the year following *Roe v. Wade*'s passage (1974), the Southern Baptist Convention in Missouri issued a statement that affirmed the belief that abortion should be available in circumstances such as rape, fetal deformity, threats to the emotional, physical, and mental wellbeing of the mother, and incest. This group even went so far as to encourage Southern Baptists to pursue legislation that protected abortion in such instances, a position they reiterated again in 1976 (Balmer 2014). The religious right did not mobilize against abortion until 1979 and their mission was not to protect unborn life. Instead, the history of the religious right's anti-abortion movement involves picking up the cause as a political strategy to stop the re-election of President Jimmy Carter in order to preserve racial segregation in schools (Balmer 2014, McKeegan 1993).

In the summer of 1971, *Green v. Connally* upheld the Internal Revenue Service policy that private schools who use race as a basis for discrimination would be denied tax-exempt status given to charitable, educational institutions, and that those who donate to these organizations are not eligible for the tax deduction allowed for charitable giving (Balmer 2014). Activist and religious conservative Paul Weyrich wanted to inject religious conservatism into politics but had tried and failed to find an issue that would get Evangelicals ramped up at the voting booth. Weyrich saw an opportunity with the *Green v. Connally* decision, as the IRS began investigating religious private schools and their policies regarding race. One such target was Bob Jones University, an institution adamant about their policy of not allowing African American students, as the founder believed that segregation was a Biblical requirement. In their efforts to remove themselves from the radar of the IRS, the school began to admit married African Americans only and enacted a policy that anyone engaged in interracial dating would be expelled, as an effort to prevent miscegenation (Balmer 2014). Despite their efforts, the IRS rescinded the university's

tax-exempt status. This angered many Christian evangelicals and allowed for Weyrich to make his rallying cry against the Democratic party by attacking Jimmy Carter, despite Republican President Richard Nixon's approval for the IRS policy. Weyrich still needed an issue to get behind and knew that racial discrimination would be difficult to get support for. Though initially not a concern, religious groups were beginning to worry about the increase in abortions following *Roe v. Wade*, and pro-life Senate nominees were winning in the 1978 elections. Weyrich viewed this as his opportunity to mobilize Evangelicals in opposition to the Democratic party, and thus the religious right became a political force. Weyrich and other fundamentalist religious leaders such as Jerry Falwell, recruited Francis A. Schaeffer who believed that legal abortion would lead to euthanasia and infanticide, to their cause. In 1979, Schaeffer, with C. Everett Koop, a pediatric surgeon, toured the United States to promote a film series called, *Whatever Happened to the Human Race* that painted abortion as a catalyst for moral decay. Republican Ronald Reagan was the chosen candidate for Evangelicals in the 1980 election, despite his passage of a liberal abortion bill as the governor of California, and despite Democrat Jimmy Carter's efforts to reduce abortion rates (Balmer 2014). In a campaign rally in Dallas, Texas, to a crowd of 10, 000 Evangelicals, Reagan failed to mention abortion even once, but expressed disdain for the IRS's "unconstitutional" agenda "against independent schools" (Balmer 2014). Reagan won the Presidency that year, and abortion became a front and center issue for the new religious right.

Today, the American Medical Association supports legal abortion. Abortion is one of the most commonly performed and safest medical procedures in the United States, with research suggesting that approximately 30 percent of women will undergo an abortion procedure before they reach their mid-forties and half will seek an abortion in their lifetimes (Veazey et al. 2015,

Aksel et al. 2013). Despite a decrease in training, abortion has fewer complications than procedures such as wisdom tooth removal, tonsillectomies, and colonoscopies (Oaklander 2014). A recent study by the National Academies of Sciences, Engineering, and Medicine which analyzed induction, dilation and evacuation, medical abortion (medication), and aspiration found that abortion in the United States is “safe and effective” and that complications from abortion are rare (Kodjak 2018). Researchers also concluded that abortion typically does not have lasting consequences on the physical or mental health of women. Furthermore, the American College of Obstetricians and Gynecologists considers induced abortion “an essential component of women’s health care” (Veazey et al. 2015:1).

The public generally supports legal abortion. According to Pew Research Center, as of July 7th, 2017, support for abortion in all or most cases “remains as high as it has been in two decades of polling” at 57 percent (Pew Research Center 2017). About 25 percent of people believe that abortion should be legal in *all* cases, while a mere 16 percent believe it should be *illegal* in all cases. The majority of women, who by definition are impacted the most by abortion access, believe that abortion should be legal in all or most circumstances (59 percent) with only 38 percent believing it should be illegal in all or most cases (Pew Research Center 2017). Men are largely supportive of legal abortion as well, with 55 percent agreeing that abortion should be legal in all or most cases. Opinions surrounding abortion have remained generally consistent over two decades though there have been brief periods of fluctuation (Jelen and Wilcox 2003, Pollitt 1997). Additionally, most Americans (69 percent) are opposed to *Roe v. Wade* being overturned (Fingerhut 2017).

Despite *Roe v. Wade*, institutional support by the American Medical Association, and public support of pro-choice values, access to abortion has been under legislative assault. Since

the passage of *Roe v. Wade*, over 1,074 laws have been passed by states to limit abortion access (Ravitz 2016). The firestorm of debate over abortion access and legality has raged since, but the most influential debates have not been among those whom abortion impacts the most – women. Instead, the debate and policies surrounding abortion access have largely been controlled by men because they are overrepresented in positions of political power. As of 2017, women make up 19.6 percent of Congress, 25 percent of state legislature, and there are only 3 women in the Supreme Court (Center for American Women and Politics 2017). In other words, women's interests are not being represented by laws because women are typically not the ones making these laws.

In the first six months of 2017, Kentucky, Texas, Colorado, Missouri, Mississippi, and Oklahoma all attempted to ban abortion in any circumstance and 28 total states have introduced legislation to ban abortion under particular circumstances including the presence of a fetal genetic anomaly (Nash et al. 2017). By mid-2017, five states had been successful in passing legislation that restricted abortion access. Moreover, 11 states have enacted unnecessary requirement that attempt to prevent abortion or cause the process to be even more difficult for the woman seeking abortion. These include the requirement of counseling prior to abortion and a 72-hour waiting period between counseling and the procedure, requiring that the fetal tissue be buried or cremated, and ultrasound requirements (Nash et al. 2017). Anti-choice proponents in the GOP have been forthright about their ultimate goal to have *Roe v. Wade* overturned (Harrington 2017). The efforts to overturn have focused on the introduction of extremely restrictive legislation such as the 6-week ban proposed in January 2017 in an effort to make the *Pain-Capable Unborn Child Protection Act*, which criminalizes abortion after 20-weeks (except when the mother's life is in peril or the pregnancy is a result of rape or incest), look more

appealing (Bassett 2017). These efforts are sometimes effective, because on October 23rd, 2017, the United States House of Representatives passed the *Pain-Capable Unborn Child Protection Act* despite the occurrence of abortions after 20 weeks being extremely rare, with less than 1 percent of women having them beyond this point (Tatum 2017). Abortions performed after the 20-week period are typically only done when there is risk to the fetus or patient (Planned Parenthood Action Fund 2018).

Taken together, these laws suggest that access to abortion is at serious risk, thus there is a growing need to understand medical students' attitudes toward abortion because they will be instrumental in whether women continue to have access to needed services in the future. Access has also been influenced by shifts in where abortions are commonly performed. Following the *Roe v. Wade* decision, responsibility for abortion services became more heavily shouldered by non-hospital clinics. In 1974, abortions performed at non-hospital clinics increased by 51 percent, with the majority (61 percent) of abortions being provided at such facilities. By 2008, 95 percent of abortions were being performed in non-hospital clinics (Aksel et al. 2013). This shift in abortion provision has resulted in less coverage of abortion in medical schools (Aiyer, et al., 1999) which has implications for the attitudes of future physicians. Medical students report more approval for abortion as well as indicate that they would be more willing to provide an abortion in their own practice in the future when they have had exposure in their curriculum (Aiyer, et al. 1999; Aksel et al. 2013).

Thus, a decrease in abortion curriculum can result in fewer future physicians willing to provide abortions, whether due to beliefs or inexperience, and evidence suggests this is exactly what is happening. The number of abortion providers has been declining since the 1980s (Veazey et al. 2015, Aksel et al. 2013, Jones and Kooistra 2011, Henshaw and Finer 2003, Jones

and Jerman 2014). The majority of U.S. counties (87 percent) do not have abortion providers (Aksel et al. 2013, Jones and Kooistra 2011). In 2008, 47 percent of women in the South were without an abortion provider, topped only by the Midwest, where 52 percent of women did not have an abortion provider nearby (Jones and Kooistra 2011). This results in a second problem impacting access: without providers nearby, women may have to travel distances of over 100 miles to obtain the procedure (Henshaw and Finer 2003, Aiyer et al. 1999). Of course, traveling costs money that these women may not have, and the procedure often requires more than one trip to a facility, as some states require counseling 24-72 hours prior to the procedure (Henshaw and Finer 2003, Nash et al. 2017).

Research has suggested that physician attitudes towards abortion can impact abortion access. In the United States, almost all states (45) have laws enacted that allow health care professionals to refuse to perform an abortion and institutions are authorized to refuse abortion provision to patients in 43 (Guttmacher Institute 2017). One study found that nurse availability impacted when abortions were available and could result in delayed procedures, with abortion procedures being the most difficult procedure to schedule willing nurses for (Kade et al. 2004). Another study found that physicians with more pro-choice attitudes towards abortion are more likely to do them (Aiyer et al. 1999). Furthermore, research suggests that physicians who are more liberal in their abortion attitudes are more likely to see a patient to begin with, and those who have more positive attitudes towards abortion are more likely to perform the procedure themselves rather than referring to another provider (Nathanson and Becker 1978).

So, what happens when abortion is illegal and inaccessible? One might assume a total absence of abortions, but this is just not the case. In the 1950s, it is estimated that anywhere from 200,000 to 1.2 million illegal abortions occurred annually, and many of these were

performed using extremely dangerous methods, such as taking bleach and turpentine orally (D.A. Grimes 2015). Vaginal insertion of turpentine, chicken bones, bike spokes, knitting needles, and of course, the infamous coat hanger abortions were not uncommon. Of course, safe abortions for privileged women were more easily obtained. If one had the financial means, she could fly to Sweden where abortion was legal, or even find a physician willing to help her (D.A. Grimes 2015). In 1974, following the passage of *Roe v. Wade*, the maternal death rate in the state of New York decreased by 45 percent.

The purpose of the current study is to examine the predictors of medical student willingness to provide abortion and assess whether those predictors have changed over time. This study also examines changes in the ranking that medical students ascribe to women's culpability for their pregnancy. In our current political climate, access to safe and legal abortion for all women in the United States is under assault. Opponents of legal abortion have pitted a woman's constitutionally protected right to choose against a fetus's "right to life," not taking into account the woman's health and safety. It is imperative to discern what impacts willingness to provide abortion provision in order to ensure that women's best interests are being represented and that the safety of women is of the utmost concern in the patient-provider relationship.

Most of the research conducted regarding medical student attitudes and their predictors is outdated, taking place prior to 2000. Furthermore, much that is recent has been conducted outside of the U.S. Those studies drawing on U.S. samples have occurred in more liberal areas of the nation where attitudes towards abortion may already be more positive. The current study takes place in a large, metropolitan area in the Southeast in a state that has, for the last several elections, been politically considered a battleground, making it an interesting context to study medical student's attitudes towards abortion (Fischer-Baum and Soffen 2017).

CHAPTER II

LITERATURE REVIEW

HOW ARE ABORTION ATTITUDES MEASURED?

Since 1972, the General Social Survey (GSS) in the United States has inquired about public beliefs regarding the legal availability of abortion for several different situations. These situations are presented as follows: “when the mother's health is in danger, when the pregnancy is the result of rape, when the fetus is severely defective, when the family is too poor for additional children, when a single pregnant woman does not want to marry, and when a married couple wants no more children” (Jelen and Wilcox 2003:490). The answers are then used to construct a scale that assesses abortion support. The Polish GSS and German ALLBUS Survey have also included abortion questions to determine attitudes towards the legality of abortion. The National Election Survey (NES) has also included a question about abortion since 1972. In 1980, researchers changed the wording of the NES abortion question but included the prior wording, in order to “show the impact on the time series” (Jelen and Wilcox 2003:490). According to Jelen and Wilcox (2003:490), the wording of questions regarding abortion does matter, but the operationalization “of such attitudes generally seems robust across different measurement strategies.” Much of the research included in this literature review used GSS data. Others used their own survey instruments.

Research suggests that the circumstances surrounding a woman's reason for desiring an abortion can influence medical professional's willingness to perform the procedure. Therefore, some research has sought to include measurements to discern under what circumstances abortion is more acceptable. It is imperative to distinguish the circumstances under which physicians *are*

willing to provide abortions and to try to reconcile that willingness with the actual reasons women seek to terminate a pregnancy.

In Carlton, Nelson, and Coleman (2000), results revealed that college students were most likely to endorse abortion if the patient had been raped or disabled mentally or physically, and in cases of the fetus being mentally or physically disabled. Studies of medical students have had similar results, for example, Gleeson et al. (2008) found 84 percent of 280 medical students would be willing to sign the necessary paperwork for an abortion if the life of the mother was at risk. This percentage decreased to 51 percent in the situation of the fetus having a disability, and 50 percent if the pregnancy was unwanted (Gleeson et al. 2008). Actual willingness to perform the procedure differs based on pregnancy circumstance as well. Of the 280 students who gave a response, 67 percent would perform the procedure if the mother's life was in danger, 55 percent would if her health was at risk, and 59 percent would perform an abortion if the pregnancy was the result of rape (Gleeson et al. 2008). Only 37 percent indicated they would perform an abortion if the child was unwanted, with only slightly more (38 percent) indicating that they would be willing if the fetus was at risk of a serious disability or disease. Finally, that percentage increased slightly to 46 percent in the case of a fetus having a serious disease or disability.

Shotorbani et al.'s (2004) results indicated that reasons for a woman seeking abortion were pertinent to the physician's decision to perform the procedure as well. Only 28.6 percent of students indicated that they planned to perform abortions regardless of the patient's reasoning for seeking an abortion, compared to 54 percent of students who would not. Few students (17.4 percent) indicated that they were unsure of whether they planned to do so.

In Fitzgerald et al. (2014), 49 students and alumni (33.1 percent) indicated that they would be willing to provide an abortion, while 38 indicated that they would be willing to provide abortion in certain circumstances only. Circumstances where the mother's life was threatened, including in the case of suicide, if the fetus suffered from severe abnormalities with a low chance of survival, and if the pregnancy was the result of rape received the most support (33, 29, and 23 respondents respectively). A situation where the mother would seek adoption for the child if the abortion was not obtained garnered the least support, with five respondents indicating willingness to perform the abortion, followed closely by the mother and child living in extreme poverty with 7 respondents.

Aiyer et al. (1999) assessed the factors that were important to physicians when deciding to perform or not perform an abortion for a patient. Overall, results revealed that physicians believed medical reasons to be more appropriate than non-medical reasons for performing an abortion. Respondents were asked to rank the most important factors when deciding to perform an abortion for a patient, and results indicated that the age of the fetus was the most important to most respondents (n=34). Lack of proper training, risk outweighs the benefits to the mother, and ethical or moral beliefs were the 2nd, 3rd, and 4th most important (n=10 v. 10 v. 10 respectively). Eight respondents indicated that disagreement with the woman's reason was the most important factor for their decision (Aiyer et al. 1999).

PREDICTORS OF ABORTION ATTITUDES AND WILLINGNESS TO PROVIDE ABORTION

Age

Generally, studies examining age as a predictor of abortion attitudes have yielded mixed results (Begun and Walls 2015). For example, Begun and Walls (2015) found in their study of 627 undergraduates at six U.S. universities that age was not a significant predictor of attitudes. Similarly, Gleeson et al. (2008) found that second-year students were more likely to be pro-choice than first-year students, but noted that there were no significant age differences between the two groups and concluded that the year of study was therefore responsible for differences in attitude. In contrast, several studies of medical students specifically suggest that people might be more supportive of and willing to provide abortion as they age. Fitzgerald et al. (2014) examined the attitudes towards abortion of 169 medical students and recent (within 12 months) medical school alumni at the University of Limerick in Ireland. Results revealed that students and alumni over 30 were more likely than younger students to indicate that they would be willing to provide abortion if it was legal. Researchers did not indicate whether age was statistically significant, however.

In contrast, Rosenblatt et al. (1999) found a significant correlation between age and the proclivity to believe that access to abortion should be widespread in their study examining attitudes towards contraceptive and abortion care availability of 219 first- and second-year medical students at the University of Washington in Seattle. Moreover, the likelihood of students aged over 29 to support “second-trimester abortions and the use of RU-486” was double that of students below the age of 24” and “the differences were highly significant for both first-

trimester and RU-486 abortions” (Rosenblatt et al. 1999:198). The majority of students between the ages of 24 and 28 (55.4 percent), and the ages of 29 and 38 (81.8 percent) indicated that they supported widespread access and availability for abortion in most circumstances (Rosenblatt et al. 1999). Finally, 27.9 percent of students aged 19-23 and 54.5 percent of students between the ages of 29 and 38 indicated that RU-486 should be available for most circumstances (Rosenblatt et al. 1999). Researchers concluded that the significance of age could be due to the fact that older students have more life experience that has exposed them to more contexts in which abortion may be unavoidable.

Gender

Research on gender as a predictor of attitudes towards abortion has mixed results as well. Some studies show that women are more supportive of abortion than men, while others have found the opposite. In many studies, gender has not been shown to be a significant predictor. Jelen, Damore, and Lamatsch (2002), examined attitudes towards abortion of the general population using secondary data from the General Social Survey. Using data from 1973 – 2000, the authors compared the attitudes of employed men and employed and homemaking women. The results suggested that women self-identifying as homemakers were the least supportive of abortion (mean score of 3.3 on a scale of 0 – 6, with 6 being most pro-life). There was little difference between the attitudes of employed men and women across time, though generally both groups were significantly more likely to endorse pro-life attitudes than homemaker women (Jelen et al. 2002).

In contrast to population studies, which suggest that there is little difference by gender, one study found that employment status matters. Rosenblatt et al. (1999) sampled medical

students at the University of Washington and found a significant association between gender and the belief that surgical abortion should be widely available. In this study, 63 percent of women and 52 percent of men indicated that abortion provisions should be available for any circumstances. Shotorbani et al. (2004) sought to assess the attitudes of 312 first- and second-year nursing students in the MEDEX (physician assistant), nursing, and medical programs at the University of Washington towards abortion services and their intentions as future health care providers. This study revealed that female students, who made up 55 percent of the sample, may be more likely than male students to have intentions of providing medical and surgical abortions, however, researchers noted that the significance was marginal, but did not provide any suggestions as to why this was the case (Shotorbani et al. 2004).

Carlton et al. (2000) assessed the attitudes of a much larger sample of 1, 118 students at a university in the southeastern U.S., towards abortion as well as their commitment to abortion as an issue. Commitment was gauged by assessing responses on 14 specific items in the survey that examined “interest in, knowledge of, and active involvement in the issue” of abortion (Carlton et al. 2000:621). The results revealed no significant difference in pro-choice attitudes between men and women, however, gender differences emerged on attitudinal measures. For example, women were more likely to disagree with statements that abortion is an acceptable form of birth control, or that abortion should be allowed to occur after the first trimester (Carlton et al. 2000), though overall, these reasons were the least supported by all students in the sample. The authors suggest that females were more significantly committed to the issue of abortion than males because their answers more extreme than men’s either in support of or against abortion (Carlton et al. 2000).

Gleeson et al. (2008) examined willingness as a doctor to provide abortion services and attitudes towards abortion law in the United Kingdom among 300 first- and second-year preclinical students at the University of Birmingham, more men than women considered themselves pro-choice (64 percent and 58 percent respectively).

In Fitzgerald et al. (2014), 58 percent of women and 51 percent of men indicated that abortion should be available, but “female students indicated greater reticence towards actually performing abortions if legalised (32 percent women vs 24 percent men)” (Fitzgerald et al. 2014:712). However, similar to findings in other studies, gender was not statistically significant.

Religion

Religion and religiosity are often at the forefront of the abortion debate. Jelen and Wilcox (2003) found in their extensive literature review of empirical abortion opinion research that religion consistently had the strongest association with abortion attitudes. The Catholic Church has long held an anti-abortion stance (Jelen and Wilcox 2003, Hoffman and Johnson 2005, Gonzalez and Billings 2001). Protestants generally oppose abortion, especially Evangelicals, while “mainline” Protestants tend to be more pro-choice. Jews are generally more pro-choice. Interestingly, there has also been a shift among younger religious followers, with younger Catholics becoming more pro-choice, and younger Protestants becoming more pro-life but this is largely due to shifts in church attendance (Jelen and Wilcox 2003). Attendance among Catholic youth has declined, while Protestant youth attendance has increased. Greater opposition to abortion is associated with frequent attendance “even when denominational affiliation and doctrinal beliefs have been controlled” (Jelen and Wilcox 2003:492). Furthermore, even in

congregations where a pro-choice stance is taught, those who attend frequently have a higher likelihood of opposing the legality of abortion (Jelen and Wilcox 2003).

In Jelen et al. (2002), religion was shown to mediate attitudes towards abortion in their study of gender and abortion attitudes, but only in some groups. Among men, Jews were more likely than other men to be pro-choice, and secular views among homemaker women were significant as well. However, when controlling for attitudinal variables of gender roles, the impact of Judaism and secularism were reduced. When examining the individual predictors of abortion attitudes among all three comparison groups—men, employed women, and homemaker women, results revealed that religious service attendance was significantly negatively correlated with abortion attitudes of all three groups, even more so than religious denomination, which had a significant negative relationship, but not to the same extent. Additionally, Gleeson et al.'s (2008) study found students who indicated that they practiced a faith were more likely to identify as pro-life than those identifying as non-practicing. Finally, in Begun and Walls (2015), conservative Protestant identification was significantly associated with anti-choice attitudes, and there was a positive association between religiosity and anti-choice attitudes. As participants reported higher religiosity, they were also more likely to endorse anti-choice attitudes.

It is imperative to assess the ways in which religious beliefs can impact students' and physicians' willingness to perform abortion and offer abortion provisions. Research has suggested that medical students will be less willing to provide abortion services in their future careers if they have strong religious objections to abortion (Shotorbani et al. 2004). Furthermore, those who are religious are more likely to support conscientious objection by physicians, which allows medical practitioners to refuse abortion and contraceptive services based on their own bias (Strickland 2012).

In Shotorbani et al.'s (2004) study, 24 percent of respondents enrolled in medical programs at the University of Washington cited their religious beliefs as their reasoning for having no intentions of performing abortion in their future careers. A higher percentage (31 percent) indicated that abortion is "against their personal values," which was significantly associated with the response that they did not intend to offer surgical or medical abortion services, though it is unclear what those values are (Shotorbani et al. 2004).

Veazey et al. (2015) interviewed 29 fourth-year students enrolled in family planning electives at 14 accredited medical schools across various regions of the U.S. to discern students' reasoning for enrolling in family planning electives, their future practice goals, the impact of the electives on their views regarding abortion following completion of the electives, as well as assess the self-perceived proficiency following completion of electives. The researchers also sought to examine the students' overall satisfaction once the elective was completed. Only one student indicated that they did not plan to provide abortions for religious beliefs, however, this student did note that they were pro-choice. Brown et al. (2014:119) found in their comparison of 434 fetal care pediatric and maternal fetal medicine specialists that in cases of diagnosed fetal abnormalities, physicians with high levels of religiosity are more likely to "indicate that effects on marital and family relationships, and economic considerations, are not appropriate reasons to end a pregnancy" than those who are less religious.

Fitzgerald et al. (2014) saw contrasting results, as religion was the least frequent cited rationale by 4 of 19 students who believed abortion should be illegal in Ireland, with the belief that the fetus is a person being the most cited (15 respondents).

Strickland (2012) examined attitudes regarding conscientious objection and willingness to be involved in abortion provisions among 733 medical students at four universities in the

United Kingdom. Nearly half (45.2 percent) of the respondents felt that doctors should be able to decline performing procedures based on “moral, cultural, or religious” objections (Strickland 2012:23). Not surprisingly, religious respondents were more likely to feel this way, as crosstabs of the data showed that 51 percent of the 126 Protestant respondents and 46 percent of the 83 Roman Catholic respondents agreed that doctors should be allowed to do so. Of the 65 Muslim students, 48 (76.2 percent) agreed with the statement. Fifty-four percent of Jewish respondents agreed that conscientious objection is acceptable physician practice, but there were only 11 respondents identifying as Jewish in the survey (Strickland 2012). Of the 301 respondents who identified as having no religion or being atheist, 35.5 percent (106 students) agreed that doctors should be able to object due to moral/cultural/religious reasons while 50.8 percent disagreed. The survey also included a section that asked respondents to indicate whether their objections for 11 medical procedures were due to religious reasons. The abortion procedures listed included abortion for congenital conditions at two different gestational ages (prior to 24 weeks and after 24 weeks), abortion for contraceptive failure prior to 24 weeks, and abortion for a raped minor prior to and after 24 weeks (Strickland 2012). Muslim, Protestant, and Roman Catholic medical students were more likely to list religious objections to the 11 procedures (28.4 percent, 27 percent, and 23.01 percent respectively). Jewish students were the least likely to indicate religion as a reason for objecting to the practices, confirming prior research suggesting Jews have more positive attitudes towards abortion. Overall, more respondents objected for non-religious reasons than for religious reasons but it is unknown what those reasons were as they were not examined in the study (Strickland 2012).

In Aiyer et al. (1999), researchers examined the attitudes of 82 physicians in Bronx, New York to assess attitudes towards abortion and determine what factors impact those attitudes, as

well as how those attitudes impact willingness to provide abortion provision. Results revealed a significant association between religion and willingness to provide abortion, with Catholics having the least willingness.

Religious objections to abortion can determine whether students are even willing to learn about abortion provisions. Espey et al. (2004) surveyed 126 medical students in the eight-week Ob/Gyn clerkship at the University of New Mexico School of Medicine (UNMSOM) to assess attitudes towards an optional half-day Planned Parenthood Center experience in Albuquerque, New Mexico and discern whether the experience impacts attitudes towards abortion. The students were allowed the opportunity to spend a half-day at the Albuquerque Planned Parenthood Center, where they were able to observe “counseling sessions, procedures, and examination of the products of conception” (Espey et al. 2004:97). Among the reasons given by the 40 students who did not attend the half-day experience, 14 students declined for religious objections. Others who declined and cited their reasons for not attending indicated that they wanted to spend more time on other OB/GYN topics (16 students), unfavorable personal views towards abortion (11 students), scheduling conflict (9 students), or the belief that they had already received adequate clinical abortion experience (4 students).

Physician willingness may be predicted by area of specialization. For example, Brown et al. (2014) compared Maternal-Fetal Medicine Specialists (MFMs) and Fetal Care Pediatric Specialists (FCPs) and found that both groups generally felt that fetal abnormality, the impact of a disabled child on familial relationships, and the healthcare costs of a child with disabilities were appropriate reasons to have an abortion. FCPs were less likely to indicate support for all three circumstances than MFMs (Brown et al. 2014). Although the majority of both groups indicated that health care costs of a disabled child is an appropriate reason to seek an abortion,

this was the least supported reason overall, with about 56 percent of FCPs feeling that this is an appropriate reason, and 73.5 percent of MFMs indicating such (Brown et al. 2014). Surprisingly, the impact on marriages and familial relationships that a child with a disability may have seemed to be the most supported reason for having an abortion among the three options given, as this had the most disagreement from both groups in response to the statement that it is not an appropriate reason for abortion, with 70.2 percent of FCPs disagreeing, and 80.5 percent of MFMs indicating such (Brown et al. 2014). Finally, 63.5 percent of FCPs and 78.4 percent of MFMs felt that the existence of an abnormality of the fetus is an appropriate reason to consider abortion (Brown et al. 2014).

Personal Values and Beliefs

In studies assessing abortion attitudes among medical students, one's openness to abortion and willingness to provide abortion provision may be influenced by their existing beliefs as pro-life or pro-choice. Hwang et al. (2005) sampled California advanced practitioners and found that 33 percent of pro-choice respondents desired abortion training, compared with 6 percent of those who indicated that they were pro-life or neither. Furthermore, 65 percent of the sample indicated they had referred a patient for an abortion, and 76 percent felt "somewhat or very familiar with medical abortion," and thus may feel that they are not in need of more training (Hwang et al. 2005:95). Moreover, the study was conducted following the 2003 passage of California's Reproductive Health Privacy Act, which provided clarification for advanced practitioners' legal right to provide medical abortions. Consequently, it's possible that the sample population was unaware of their abilities as an advanced practitioner.

In a sample of medical students, Gleeson et al. (2008) found that the willingness to be involved in any – even minor abortion provision such as counseling or signing paperwork - is less likely for those with pro-life values. It makes sense that those who are pro-choice would be more willing to be involved at all stages of procedural process. In Rosenblatt et al. (1999), researchers found a significant correlation with the belief that abortion should be widely available and students' plans to provide abortion services in future practice. Of students who intended to practice in the field of obstetrics, 75 percent of those who indicated support for widespread medical abortion access indicated a willingness to provide this service in their own practice. Moreover, 60 percent of those supporting widespread first-trimester abortion availability indicated that they would provide such services in their practice. However, a smaller number of those supporting second-trimester abortion availability indicated a willingness to offer such services (40 percent).

Area of Specialty and Desired Specialty

Research has demonstrated that the field a physician practices in or that a student intends to practice in may influence abortion opinions and willingness to provide abortion. Shotorbani et al. (2004) surveyed nursing and medical students, as well as students enrolled in the physician assistant program (MEDEX) at the University of Washington to determine their attitudes towards abortion as well as future intentions of providing abortion services. Overall, 69.8 percent of respondents in all programs indicated that abortion should be available in all circumstances (Shotorbani et al. 2004). The large majority of students enrolled in the School of Nursing agreed with this statement, with 82.8 percent feeling that abortion should be accessible under all circumstances. Sixty-four percent of those in the physician assistant program and 72.1 percent of

medical students agreed (Shotorbani et al. 2004). The survey also asked respondents to indicate whether they agree with the statement that “advanced clinical practitioners should be able to provide medical abortion” (Shotorbani et al. 2004:60). The majority of respondents in the nursing program agreed that this should be the case, and a little over half of those in the physician assistant program and less than half of medical students agreed with the statement (83 percent vs. 57 percent vs. 43 percent respectively). There was less support for the belief that advanced clinical practitioners should be able to provide surgical abortion, with 72 percent of nursing students, 45 percent of physician assistants, and 21 percent of medical students agreeing with the statement. Despite most students in all programs agreeing that abortion should be legal in all circumstances, only 31 percent indicated that they “intended to provide medical abortion” in the future, with 46 percent responding that they would not (Shotorbani et al. 2004:61). Intentions to provide surgical abortion were even lower, with 18 percent indicating that they would, and 58 percent indicating that they would not. However, 90 percent of respondents did indicate that they would refer a patient for abortion at another provider if they did not intend to provide it themselves, and 34 percent did indicate that they did not expect to perform abortion “because it was outside the scope of their practice” (Shotorbani et al. 2004:61). Shotorbani et al. (2004:61) found that the “likelihood of intending to incorporate surgical abortion into practice was strongly associated with an intention to pursue a career in obstetrics and gynecology or women’s health, as well as the belief that advanced clinical practitioners should be allowed to provide surgical abortions.” Moreover, results indicated that those who felt that abortion services did not fall within the margins of their practice were significantly associated with “not intending to provide surgical or medical abortions” (Shotorbani et al. 2004:61).

Brown et al. (2014) found that area of specialty can impact how medical professionals ethically perceive abortion. In their study, though generally, Fetal Care Pediatric Specialists and Maternal-Fetal Medicine Specialists indicated that their responsibility as a physician was to the woman, the latter were more likely to indicate that the fetus is not their primary focus.

FORMAL ABORTION EDUCATION

Amount of Abortion Coverage in Medical School Curriculum

The following section provides an analysis of prior research assessing abortion curriculum as well as student attitudes towards abortion training in the university setting.

Prior research has suggested that abortion education in medical schools is subpar and inadequate. Espey et al. (2005) conducted a study to assess the preclinical, third- and fourth-year abortion curriculum of 78 accredited medical schools in the United States. Thirty-four facilities (44 percent) responded that no formal abortion education occurred in the preclinical years. Nineteen percent indicated an abortion-specific lecture, and 11 percent included discussions in small groups of abortion “and/or a clinical experience in abortion care” (Espey et al. 2005:641). For third-year clerkships, 25 percent of the directors indicated that there was no formal abortion education, and only 45 percent of the third-year clerkships offered a clinical experience to students at all (Espey et al. 2005). Fifty-two percent of the respondents indicated that a reproductive health elective was offered for fourth year students, but the majority (92 percent) revealed that 10 percent or less enrolled in these electives (Espey et al. 2005). In total, 17 percent of the responding medical schools did not include any formal abortion education in the preclinical years or the third-year clerkship. Thirty-five schools offered a clinical abortion

experience, with 75 percent of those being integrated, with integrated being defined as “as an experience that students were alerted to in advance, most often at the clerkship orientation, either verbally or in writing” with “non-integrated” being “those where students who expressed an interest to the clerkship director could take the initiative to arrange their own experience” (Espey et al. 2005:641).

Steinauer et al. (2009) had similar results in their study of 77 accredited medical schools in the U.S. and Canada that sought to obtain a better grasp of what students are learning about sexual and reproductive health and contraception. Sixty-seven percent (51 schools) included at least one subtopic on elective abortion (medical elective abortion was the most commonly reported of these, at 61 percent) but 25 of 76 schools did not include “any discussion of elective abortion procedures, pregnancy options counseling, post-elective abortion care or elective abortion law/policy/availability” (Steinauer et al. 2009:76). Only 36 percent of school representatives indicated that pregnancy counseling was covered in the curriculum. Of the 55 schools that gave information indicating whether classes were required or optional, 32 (58 percent) reporting that “some discussion of elective abortion was included in required courses, and in seven schools (13 percent) elective abortion was only included in optional/elective courses” (Steinauer et al. 2009:76). Moreover, 15 percent (8/52) of schools indicated that courses did not include any coverage of elective abortion topics other than medical elective abortion. Finally, results revealed that “The ethics of elective abortion was included in 45 percent of schools, and in four schools (5 percent) inclusion of elective abortion was limited to ethical issues” (Steinauer et al. 2009:76). Furthermore, medical schools in the South “were less likely to address some contraception and elective abortion topics, as well as other SRH topics when compared to schools in other regions combined” (Steinauer et al. 2009:78). Schools in the

U.S. were less likely than those in Canada to cover pregnancy options counseling and late-term abortion. The total amount of classroom time dedicated to elective abortion ranged from less than 15 minutes to over 8 hours (Steinauer et al. 2009).

Without sufficient abortion training, it is reasonable to suspect that students will shy away from offering abortion in their future practice. Research supports this suspicion. For example, Hwang et al.'s study (2005), 67 percent of respondents identifying a reason for not providing or assisting with medical abortions indicated that they had no training opportunities. Similarly, most students (25) in Veazey et al. (2015) revealed that they had future intentions to perform abortions in their practice, but stated that their intentions hinged on whether they received sufficient training.

Student Knowledge and Exposure to Abortion

By assessing medical student knowledge of abortion, we can further support the argument that abortion curriculum is inadequate in medical schools. If exposure to abortion training and knowledge surrounding abortion provisions improves attitudes and willingness to provide such services, improving student knowledge and experience with abortion and abortion curriculum is imperative to improving abortion access.

Cessford and Norman's (2011) study of second- and fourth-year medical students at the three University of British Columbia (UBC) sites sought to assess their level of knowledge concerning abortion topics and readiness to perform the procedure. The fourth-year students scored higher on the knowledge-assessment and more fourth-year students answered each survey item correctly than did second-year. Moreover, students in their fourth-year answered significantly more questions correctly in the all of the three categories: "a significantly higher

proportion of fourth-year students correctly answered two or more abortion epidemiology questions out of four (37 percent vs. 9 percent), both practice guideline questions (27 percent vs. 15 percent), and three or more clinical knowledge questions out of five (52 percent vs. 15 percent) than second-year students” (Cessford and Norman 2011:40). When asked about readiness to perform abortion or refer to a provider, a similar percentage of fourth-year and second-year students would provide an abortion (37 percent and 38 percent respectively). Of those who would refer the patient to another provider, 36 percent were fourth-year, and 34 percent were second-year (Cessford and Norman 2011). Fewer students indicated that they would suggest the patient see another doctor “because they could not support her decision to terminate a pregnancy” (12 percent of fourth-year students and 6 percent of second-year students) (Cessford and Norman 2011:40). Finally, 15 percent of fourth-year students chose “other or indicated that they did not know what they would do, and 22 percent of second-year students indicated such (Cessford and Norman 2011:40).

Gleeson et al. (2008) found in their UK study found that student identification as pro-life or pro-choice was significantly associated with year of study. The majority of students in their second-year indicated that they were pro-choice while fewer first-year students indicated such (70 percent vs. 54 percent respectively). Overall, students were pro-choice, as 64 percent responded that they were moderately or strongly pro-choice with a small minority (29 percent) indicating that they were pro-life. Seven percent were undecided. This could be because coverage of abortion increased later in students’ education, but the researchers did not indicate whether this was the case.

Most interviewees in Veazey et al. (2015) reported that they felt more competent in in their ability to counsel for contraceptives following the conclusion of the family planning

elective course (22 students), while 48 percent (14 students) felt more prepared to give options counseling (Veazey et al. 2015). Only 6 of the 29 students indicated that they felt increased competence in their knowledge of pregnancy termination. However, overall, students felt that their peers could benefit from the elective regardless of their specialty interests, and that those specifically interested in internal medicine, pediatrics, Ob/Gyn, and family medicine would especially benefit (Veazey et al. 2015). Furthermore, the elective allowed for exposure to “aspects of medicine” that are not included “in medical school that are really important” (Veazey et al. 2015:4). Additionally, results revealed that overall, participation in the family planning electives did not change students’ views about abortion, although several students indicated that their pro-choice beliefs were strengthened in some way, and felt that they were left with a better understanding of the necessity for widespread abortion access. They also indicated a better understanding of the importance of the ability to provide advice and counseling to women about pregnancy options. One student who was initially pro-choice leaning responded that the family planning course reified their beliefs and “motivated [them] to be more open about pro-choice and abortion...among classmates and future colleagues...” (Veazey et al. 2015:4). None of the students in this study indicated that their views became less favorable, however, one student responded that they became more unsure of where they felt legal restrictions, if any, should be placed, especially when it comes to gestational age.

Student Willingness to Participate in Abortion Curriculum

Abortion education in medical schools is a critical aspect of medical students’ training. Despite research demonstrating that the coverage of abortion in medical schools is insufficient, there is research indicating that medical students are open to and accepting of abortion in their

curriculum and feel that it is valuable. Eighty-percent of the 86 students who attended the Planned Parenthood half-day experience in Espey et al.'s (2004) study indicated that they felt the "amount of exposure" to abortion care was "just right" with 81 percent "somewhat" or "strongly" agreeing that the experience would assist them with counselling about abortion (Espey et al. 2004:98). Moreover, 82 percent found the experience valuable and 90 percent indicated that they would recommend the experience to another student. Of the 86 students who participated and responded to the relevant questions, 80 indicated that they believe abortion should be included in women's health care services, and 84 agreed that abortion should be included in the curriculum for medical students (Espey et al. 2004). Of the non-participants who answered these two questions, 26 of 38 answered that they believe abortion should be included in women's health care services, and 31 of 37 students believe it should be included in the curriculum. The majority of students, 62 percent, indicated that their attitudes did not change after participating in the abortion care experience, but of the 33 students that indicated their views had changed, 31 became more supportive of abortion while 2 students became less supportive.

Espey et al. (2008) conducted a second study of 100 U of New Mexico School of Medicine (UNSOM) students assessing pro-life and pro-choice beliefs, as well as attitudes towards the Planned Parenthood abortion clinical or two-week health elective, mandatory abortion curriculum, and their intentions to offer abortion at their future practice. Seventy-three percent (n=53) of those who participated in the Planned Parenthood clinical or a two-week reproductive health elective indicated that they would recommend the abortion care experience to another student, and 84 percent indicated that "the abortion care experience was a worthwhile part of [their] education" (Espey et al. 2008:206). Sixty-nine percent of participants and 64

percent of nonparticipants indicated that “Overall, UNM has adequate, appropriate education about abortion” (Espey et al. 2008:206). The majority of both participants and nonparticipants responded that “the amount of abortion education in UNM curriculum was ‘just right’” (Espey et al. 2008:206). The majority of both participants and non-participants indicated that they were pro-choice (71 percent vs. 61 percent) while 4 percent of participants and 30 percent of nonparticipants were pro-life. As expected, pro-choice students were “more likely to participate in a clinical abortion experience” (Espey et al. 2008:207). Overall, 96 percent of survey respondents indicated that abortion curriculum is an “appropriate topic for education in medical school” further demonstrating that most students believe abortion education is imperative in medical schools (Espey et al. 2008:206).

Shotorbani et al.’s (2004:61) study of students at the University of Washington also found that 64 percent of the students in their sample would be willing to “attend a program with a curriculum that requires abortion training.” A little over half (55 percent) responded that they would be willing to enroll in abortion training-related electives but only about 24 percent indicated that they “would seek a residency program or practicum site that specifically includes abortion training” (Shotorbani et al. 2004:62).

Most students (21 percent, 72 percent respectively) in Veazey et al. (2015) indicated that they enrolled in the family planning electives because they felt they needed more experience and knowledge in the realm of family planning. Forty-eight percent (14 students) responded that the elective was chosen to fill a knowledge gap left by their third-year clerkships. These students “sought to use this knowledge to inform their residency program choices” (Veazey et al. 2015:3). In their interview, one student suggested that they “wanted more exposure because [they] didn’t get much in [their] regular OB rotation” (Veazey et al. 2015:3). Other students responded that

their choice to enroll in a family planning elective was informed by their wish to offer abortion services in their future practice (21 percent, 6 students). Interestingly, several students (24 percent) cited a desire to define their personal beliefs surrounding abortion as motivation for enrolling in family planning electives. Every student interviewed in the study stated that they would recommend the elective experience undertaken to their peers.

THEORETICAL FRAMEWORK

Research surrounding abortion attitudes of physicians and future medical professionals has been largely a-theoretical as there are few theories dealing with abortion attitudes directly. Kumar, Hessini, and Mitchell (2009:625) have sought to theorize abortion as a social construct, from a theory of stigma within a local context, suggesting that while abortion stigma may seem like a “universal social fact,” it is greatly influenced by the societal context in which it exists. The United States provides evidence of this; abortion has not always been illegal, nor controversial in this country (Ravitz 2016). The current study is guided by this theory of abortion stigma and the ways in which this stigma is attached to the social construction of motherhood, as well as the social construction of abortion itself. Ideals of motherhood and socially constructed discourses surrounding abortion influence physician’s perceptions of what are “acceptable” abortions as well as their willingness to perform the procedure.

As previously mentioned, abortion was not always a controversial procedure. Prior to the 1900s, abortion was considered a private decision made by a woman and was entirely legal until the point of “quickening,” the point at which a woman felt the fetus move (Rothman 2000). Rothman (2000) argues that at the point of quickening abortion becomes a matter of conflicting rights - the rights of the mother and the rights of the fetus. Again, the movement to criminalize

abortion came from physicians seeking to eliminate the competition of midwives and maintain power within the medical industry. Abortions were a booming business, even advertised in newspapers, but physicians wanted to monopolize on abortion and thus, sought to define it as a medical procedure, giving them more credibility and authority over abortion (Rothman 2000). By framing abortion as a medical procedure, physicians assigned themselves the lone privilege and authority to perform them. By arguing that the embryo is actually a baby, physicians were able to frame those performing abortions-- "abortionists," as "incompetent, dirty, and backward" and abortions themselves as "wrong and immoral, a kind of murder" (Rothman 2000:71). Moreover, by framing abortion as a medical procedure, the implication was that only medical professionals could understand the concept of abortion and were therefore the only ones qualified to perform them. Consequently, two types of abortions became defined: "the ones the doctors did not do, which were 'immoral,' and the ones the doctors did do, which were both moral and...therapeutic" (Rothman 2000:71). This not only made abortion a moral debate but framed the largely female competition of midwives as "quacks" who were not qualified for perform abortions.

Kumar et al. (2009:626) draw from Goffman's operationalization of stigma, defining it as a characteristic that is "deeply discrediting" and "negatively changes the identify of an individual to a tainted, discounted one." Stigmas are used to distance and group individuals that we perceive to have socially constructed negative characteristics into groups of "Others." In Western society, beliefs about what constitutes femininity and womanhood are socially constructed, and conceptions of motherhood are deeply entwined within these social constructs. Becoming a mother is treated as an assumed and natural life course for women from the time they are young girls and believed to be a rite of passage from child to woman (Malacrida and

Boulton 2012). In this sense, mothering is framed as a “need” for women to embody Western ideals of femininity and complete womanhood (Kumar et al. 2009). Furthermore, women are grouped into categories of the “good” mother and the “bad” mother and this categorization begins before a woman is even pregnant (Malacrida and Boulton 2012). For example, young women, girls even, are directed by physicians to ingest folic acid supplements, keep their weight within the healthy range, and avoid alcohol and tobacco by their gynecologists prior to ever deciding to mother, a policing of the body that can be equated to “preemptive ‘good’ mothering” (Malacrida and Boulton 2012). Childfree adult women are not exempt from this policing of femininity either, especially those who are childfree by choice, as they are often marked as “failing to become fully adult, fully selfless women through the vehicle of motherhood” and therefore assigned as the “Other” (Malacrida and Boulton 2012:750). Ideals of motherhood as it has been constructed in Western society require that women be selfless and ultimately sacrifice themselves and their own personhood, constantly engaged in parenting and endlessly available to do so (Malacrida and Boulton 2012).

The stigma attached to pregnancy termination exists within the context of the ideals of femininity and motherhood outlined above. Consequently, women who have abortions are stigmatized because they are perceived to be deviating from the norm, making an “unnatural” choice, “defying familial expectations, cultural norms, or ideas of motherhood” (Kumar et al. 2009:633). Thus, abortion has been socially constructed and stigmatized as an act performed out of selfishness and immorality, and one that will lead to an inevitable feeling of shame and guilt, and a natural mourning of the “loss” (Kumar et al. 2009). Moreover, anti-abortionists construct mental health pathologies for women who have abortions through the use of phrases such as,

“post-abortion syndrome” to further normalize the ideology that women will and should regret their decision (Kumar et al. 2009).

Additionally, abortion stigma impacts physicians and medical professionals who assist in terminating a pregnancy. Anti-abortion health care providers and other opponents of abortion will publicly refer to abortion providers as “abortionists” and “murderers” which further perpetuates abortion stigma and attempts to frame those who assist with abortion as criminals, despite abortion being a legal medical procedure in the U.S. with high public support (Kumar et al. 2009). This framing of medical professionals who provide abortion as murderous criminals has encouraged harassment of medical professionals which can be a deterrent to willingness to provide abortion and thus, threatens access to safe abortion. The decades following the passage of *Roe v. Wade* have found anti-abortion activists targeting the homes of physicians working at specialized abortion clinics, distributing brochures that insinuate that these physicians were more deserving of being shot than Adolf Hitler (Aksel et al. 2013). In the U.S. in 2008, 89 percent of abortion facilities providing over 400 abortions per year experienced harassment, including bomb threats, picketing, and physical threats towards patients seeking services (Jones and Kooistra 2011). Harassment, personal safety issues, stigma, and fear of ostracization by friends and family are often cited by physicians and medical students as a hindrance to willingness to provide abortion provision and harassment is often cited as a barrier to willingness to provide abortion services (Doran and Nancarrow 2015, Hwang et al. 2005, Veazey et al. 2015, Shotorbani et al. 2004). In some instances, harassment and stigma can lead physicians and nurses to resign, which has become a serious issue in locations such as rural Canada, where providers have reported “having to ‘fly under the radar’” (Doran and Nancarrow 2015:176). This is not surprising, as harassment against providers has escalated to the point of murder, such

as the highly publicized gun murders of David Gunn in 1993 and George Tiller in 2009 by anti-abortion activists (Aksel et al. 2013, Jones and Kooistra 2011). When providers must fear for their safety due to abortion stigma that encourages violence against them, this is detrimental to abortion access.

The Second-Wave Feminist movement demanded legal abortion framed within the concept of bodily autonomy and the right to privacy as well as the right to the safety of the mother. Thus, *Roe v. Wade* is ultimately a law protecting the privacy of women's medical decisions (Hendricks 2010). However, since 1973, there has been a shift in the way the abortion debate is framed. Rather than focusing on the safety of the mother and her rights as a personhood, the anti-abortion discourse focuses on the personhood of a fetus. Framing the fetal subject as a baby with "feelings, sentience, desires, and other facets of autonomy" and ascribing it with the characteristics of "innocence, purity, vulnerability and filial love" gives more credence to the stigmatization of physicians performing abortions as murderers and criminals (Kumar et al. 2009:631). This personification of the fetus further perpetuates the stigma against women who have abortions as well. In this context of fetal personhood, a woman who terminates a pregnancy is viewed as a selfish murderer of another person whom she is supposed to be responsible for the care of, rather than an autonomous human being that has opted to have a "common and simple medical procedure" performed (Kumar et al. 2009:633). This construction of the fetus as a person is perpetuated through legislation such as the *Pain-Capable Unborn Child Protection Act* mentioned earlier. The title incites feelings of empathy for the fetus, insinuating that it is an unborn child that needs to be safeguarded from abortion. Thus, women who terminate a pregnancy have, rather than selflessly give up their own personhood as they are

expected to do as women, selfishly denied their inherent role as a mother and murdered an unborn child.

Present Investigation

The present investigation attempts to examine the predictors of medical students' attitudes towards abortion and a change in these predictors over a 15-year time span. The current study also examines whether there has been a change during this time in the way medical students rank women's culpability for their pregnancy. The social construction of abortion, abortion stigma, and motherhood allows for the division of reasons for abortion as moral or immoral. Consequently, willingness to provide abortion is rarely a straightforward "yes" or "no," rather, there are "acceptable" circumstances and "unacceptable" circumstances. The current investigation collected data from a Southeastern state that is politically contested as a battleground state, but one that has historically voted Republican. This is an advantage, because earlier data from the United States originated in regions, as well as institutions that are liberal leaning (Shotorbani et al. 2004). Further, the data is collected during two separate time frames approximately 15 years apart. Not only has this never been done, but this investigation comes at a time when lawmakers are actively working to restrict abortion access. Approximately more than 30 percent of laws passed to restrict access to abortion have been passed since 2011 (Nash et al. 2017). Within the last year, both Texas and Arkansas enacted legislation that bans the most common procedure used for second-term abortions, which are incredibly rare to begin with, and that requires fetal tissue to be buried and cremated, while Iowa and Kentucky have successfully banned abortions after 20-weeks (Nash et al. 2017).

As mentioned above, the coverage of abortion in medical schools has decreased largely as the result of the responsibility of abortion provision shifting from hospitals to health clinics since the passage of *Roe v. Wade*, which is detrimental to abortion access, as students who are exposed to abortion in their education are generally more willing to provide abortion services. If students are to feel comfortable with medical procedures, adequate training is non-negotiable. Sufficient exposure to abortion as a medical procedure in medical school could perhaps reduce the stigmatization of women and medical professionals that may prevent students from being willing to offer abortion provision in their future practices. Unfortunately, there are currently no standards of required abortion curriculum at the national level and though there is little research that analyzes the degree to which medical schools in the United States expose students to information about abortion or the procedure itself, the American Medical Women's Association has suggested that exposure is negligent, and research outlined in the above literature review reinforces this (Cessford and Norman 2011). Medical school curriculum typically requires students to receive training on medical procedures in a clinical setting, allowing them to get hands-on experience, but this is often not the case with abortion. Instead, students are learning about abortion through lectures, that is, if the topic is covered in their curriculum at all (Espey et al. 2004).

Research Hypotheses

The purpose of this study is to assess the predictors of medical students' attitudes and willingness to provide abortion and whether these predictors have changed in a 15-year period. Thus, the following hypotheses guide the current study:

1. Overall, willingness to provide abortion in any and all circumstances will have increased from the time the first sample was collected to the time when the second sample was collected.
2. Females will be more likely to be willing to provide abortion.
3. Respondents with stronger religious beliefs will be less willing to provide abortion.
4. Students who are further in their medical school education will be more willing to provide abortion.
5. Students who have had exposure to abortion training in their curriculum will be more willing to provide abortion.
6. Students who have had personal exposure to abortion will be more willing to provide abortion.

CHAPTER III

METHODS

RESEARCH DESIGN

The current study is an exploratory analysis examining predictors of medical students' attitudes towards abortion at two separate points in time approximately 15 years apart. The data for this analysis was originally collected as a component of a collaboration between a public university and a medical school in a metropolitan area in the Southeastern United States exploring abortion attitudes of medical students. Institutional Review Board (IRB) approval was received both by the university as well as the medical institution prior to data collection. To collect the data, a 43-item questionnaire (see Appendix A) was distributed to students enrolled at the medical school in 2000, and again in 2015. Participation for both samples was entirely voluntary and anonymous. Respondents were also made aware that they could stop the survey at any time that they felt uncomfortable and could skip any questions they wished. Though the medical school was unable to provide an exact number for the student body that received the survey due to efforts to protect student confidentiality, the institution helped facilitate survey distribution, though the format was different across the two waves. In Wave 1, a 43-item paper survey was dropped in all school mailboxes of first through fourth year students for the 2000 sample. The survey included a self-addressed envelope with postage paid to ensure ease of return. Three emails were sent to the entire medical school's student list-serve: The first email notified students about the study, the second email informed students that the study's questionnaire had been delivered via their mailboxes, and the third email thanked students who had already returned the survey and included a gentle reminder asking those who had not yet

participated to do so. In contrast, by the time Wave 2 data was collected, internet surveys had become normative and offer an easy, inexpensive way to reach students (Laguilles et al. 2011). The survey was hosted on Qualtrics, to which the collaborative university provided the medical school access. Students were emailed a pre-notification letter notifying them that they would be receiving the survey within the week. Follow-up reminder emails were sent to the study body thanking those that participated and requesting participation for those who had not yet taken part to do so. These emails were sent at one week and three weeks after the email with the survey was distributed. The Wave 2 survey was identical to the instrument utilized in Wave 1, aside from the mode of survey delivery. When students began the online survey, they were presented with a cover letter notifying the participant that their participation was voluntary and that the estimate survey time should take about 15 minutes.

For Wave 1, 194 medical students returned the survey through the mail, resulting in a response rate of 47.80 percent. The sample in the second wave of data collected in 2015 consisted of 127 respondents with an approximate response rate of 23 percent. Though low, this is not atypical for online surveys, and is consistent with what research says to expect for response rates to this research design (Millar and Dillman 2011). Laguilles et al. (2011) noted that response rates for surveys are on the decline, and within higher education, a response rate below 40 percent is the norm with anything near half being atypical. Research also suggests that web-based survey response rates tend to be lower than mail, which likely explains the lower number of respondents in Wave 2 (Millar and Dillman 2011). One possible explanation is that college students are inundated with surveys and emails and may be likely to overlook such surveys.

All cases with missing responses for variables that were included have been excluded from the data analyses, resulting with an analytic sample of 177 students in the first wave and 107 students in Wave 2. Table 1 presents the descriptive statistics for both samples, but these are also discussed as I describe each variable below.

Variables

Table 2 provides a guide as to how each variable is operationalized and coded. The following section is an outline of variables and coding with an overview of the distribution of these variables in the sample.

Dependent Variable

The dependent variable in this study is medical student willingness to provide abortion. To assess willingness, respondents were asked “Would you ever be willing to perform an abortion for a patient?” Available response categories were “1-Yes” or “2-No.” The response category “No” has been recoded to “0” in SPSS. In the first wave, most students (n=111, 62.70 percent) indicated that they would be willing, but 66 (37.30 percent) students indicated that they would not ever be willing to perform an abortion for a patient. Similarly, most students (n=81) in the second wave responded “yes,” with only 26 students indicating that they would never be willing to perform an abortion for a patient (75.70 percent vs. 24.30 percent).

Independent Variables

Gender. In the survey, respondents were asked to indicate their gender. Response categories were dichotomous, with “Male” coded as 0, and “Female” coded as 1 for the final

analysis. The sample in the first wave from the year 2000 was split almost evenly, with 50.30 percent male and 49.70 percent female. The majority of respondents in 2015 were female (56.10 percent).

Strength of Religious Belief. To assess strength of religious belief, participants were asked, “Would you say your religious beliefs are very strong, strong, somewhat strong, or not very strong?” Available response categories were: 1= “Very Strong,” 2= “Strong,” 3= “Somewhat Strong,” and 4= “Not Very Strong.” For the final analysis, responses were collapsed into a dichotomous variable, with respondents indicating “Not Very Strong” used as the reference category, recoded as 0, with all other responses recoded as 1= “Religious.” Overall, respondents from both samples were religious, with 70.60 percent (n=125) of the first wave and 47.70 percent (n=51) of the second wave having indicated “Very Strong,” “Strong,” or “Somewhat Strong” religious beliefs.

Year in Medical School. Participants were asked to indicate what year of medical school they were in. Students reported being in either their first, second, third, or fourth years of medical school. Year in medical school is a continuous measure of progress through the degree, and the mean year in school was similar for both waves; in 2000 the mean was 2.31 (S.E.=1.06), and 2.49 (S.E.=1.15) in 2015.

Exposure to Abortion Training. Students in the participating institution were exposed to abortion education during their course work focusing on ethics and/or human reproduction. While there were no formal elective credits for students to take specifically on abortion training, it was possible that a student might encounter this procedure for medical or genetic indications only during their clinical rotation in ob/gyn, at which point the student would have the opportunity to opt out of this training if they desired.

To ascertain students' exposure to abortion procedure in their education, the survey included the following question, "Have you received any training in abortion practices, indications, or procedure?" Respondents were given two response categories, "0=No," "1=Yes." Most respondents in both waves indicated that they had not received abortion training, with 79.10 percent of the Wave 1 and 76.60 percent of the Wave 2 participants responding "no" to this question.

Personal Exposure to Abortion. Two questions in the survey assess personal exposure to abortion. The two questions were, "Have you had at least one personal acquaintance who has had an abortion?" and "Have you or your sexual partner at the time ever received an abortion?" Both questions have dichotomous yes/no responses, with "no" coded as 0, and "yes" coded as 1. A new continuous scale variable was created to rank abortion exposure. If a respondent reported not having a personal acquaintance who had had an abortion, and also indicated they or their sexual partner had not had an abortion, they were coded as "0" on the abortion exposure scale. If respondent answered yes to one of these abortion exposure questions, but no to the other, then they were assigned a "1." For example, if a respondent indicated that they knew someone who had an abortion, but had not had one themselves, they received a "1" on this variable. Those respondents who had the most exposure to abortion were given a "2" – these participants both knew someone who has had an abortion and had a personal experience (either themselves or an intimate partner) with abortion. The mean for the 2000 wave was .80 while the mean for the 2015 wave was .60, indicating that the first wave had slightly more exposure to abortion (S.E.=.69, .62 respectively).

Culpability Variables. Engelmann, et al. (1996) created 23 scenarios in which medical students were asked to indicate whether they would perform an abortion, refer the patient, or do

neither of these things. Building on this work, Krupa (2000) constructed a culpability ranking system based on the perceived level of patient responsibility – this ranged from least responsible (e.g. rape) to most responsible (e.g. extramarital affair). Similar to the procedure that Englemann, et al. (1996) used, participants in this study were asked whether they would be willing to perform the abortion, refer the patient to another doctor, or whether they would do neither of these things.

Control Variables

There are several variables controlled for in the analysis.

Race/Ethnicity. Respondents were asked to indicate their race (“What is your race?”) and given the following response categories: “1=White/European,” “2=Hispanic,” “3= Black/African American,” “4=Asian/Pacific Islander,” “5=Native American,” “6=Bi-Racial/Multi-Racial (please specify),” and “7=Other (please specify).” Most respondents identified as white (Wave 1=79.70 percent; Wave 2=79.00 percent), thus for the final analysis all other categories were collapsed to create the category of “Non-White,” resulting in a dichotomous variable with White/European being the reference category. “Non-White” is coded as “1,” and White/European is coded as “0.”

Age. Respondents were asked to write in their own age. Respondents in the first sample ranged in age from 20-41, while the second sample ranged from 22-50, with the mean being 26.01(SD = 3.70) years of age for the first wave, and 26.00 (SD = 3.45) years for the second.

In a Union. Respondents were asked to indicate marital status using the following categories: “1=Single,” “2=Divorced,” “3=Cohabiting,” “4=Widowed,” “5=Married,” and “6=Separated.” This was a college student sample, and it is not surprising that the majority of respondents were single – therefore, the six categories were collapsed into two variables that better represent the data and recoded as follows: 0=Not partnered (Single/Divorced/Separated) and 1= Partnered (Cohabiting/Married). No respondents indicated that they were widowed. The majority of respondents in both the first and second wave indicated that they were not in a union (78.30 percent and 68.20 percent respectively).

Area of Desired Specialty. Respondents were asked, “In what area of medicine do you want to specialize?” and were given the option to write their answer. These variables will be coded into two categories - “0” referred to specialties that would likely not require abortion training or expect to be performing abortion as part of their career, and “1” specialties who would likely encounter and expect to perform or counsel patients about abortion in their career. Those who indicated wanting to specialize in Ob/GYN, Family Medicine/Family Practice/Primary Care, Surgery/General Surgery in their responses were coded as “1” while all other specialties were coded as “0.” In both samples, most respondents indicated fields of specialty that would not likely put them in positions to perform abortions, with 69.50 percent in the first wave, and 76.60 percent in the second.

DATA ANALYSIS

The current investigation utilized IBM Statistical Package for the Social Sciences version 24 (SPSS) to conduct all analyses. Table 1 presents the descriptive statistics that were described earlier with the study variables, while Table 2 provides the operationalization for each variable.

As a first step in exploring the differences between those that indicate they would be willing to provide an abortion and those that would not, I performed chi-square tests for categorical variables and ANOVAs for continuous variables--these results are reported in Table 3.

In Table 4, the culpability rankings that were constructed by Krupa (2000) are presented comparing how participants in Wave 1 and Wave 2 ranked women's culpability in their need for abortion, allowing an exploration of how perceptions of culpability might have changed over time. Next, I explore whether medical students are more willing to say they would perform an abortion over time. Table 5 displays the frequencies for both Waves 1 and 2 of medical students' willingness to perform an abortion for, refer to another doctor, or do nothing for each of the 23 culpability scenarios.

Finally, a logistic regression analysis was performed to explore the predictors of medical students' attitudes towards abortion. Logistic regression is the best choice for a dichotomous dependent variable (Sweet and Grace-Martin 2012). Two separate logistic regressions were run, one on each wave. Once this analysis was complete, I wanted to explore whether the strength of variables predicting willingness to perform an abortion had changed over time, therefore, I performed an equality of coefficients test. Developed by Clogg et al. (1995) the equality of coefficients tests enables the researcher to compare the magnitude of the estimated coefficients for two independent samples. The results for the equality of coefficients are presented in Table 7. There were no significant findings, and therefore, I will not discuss these further in my results, though this does suggest that the strength of the predictors has not changed overtime.

CHAPTER IV

RESULTS

BIVARIATE RESULTS

Table 3 presents the findings for the chi-square and ANOVAs. Religious belief was shown to be significantly associated with an unwillingness to provide abortion across both waves indicating that those with stronger religious beliefs are more willing to refuse an abortion. In Wave 1, abortion experience was associated with a willingness to provide, suggesting that those with more personal exposure to abortion increases one's willingness to provide an abortion. Finally, whether a respondent had abortion training in their curriculum was significant in the 2015 wave only, suggesting that those who have received abortion training would be more willing to provide an abortion ($p < .05^*$).

CULPABILITY AND CIRCUMSTANCES

Table 4 presents Krupa's culpability rankings. On the left side of the table, the first column presents the rankings as Krupa (2000) classified them. Next you will see Wave 1 and Wave 2 respondents' willingness to provide an abortion. These reasons are ranked, highest to lowest, according to the percent of the sample indicating they would be willing to perform an abortion. Overall, results show that willingness to provide abortion has increased in all circumstances given in the survey, which supports the first hypothesis that generally, willingness to provide abortion in any and all circumstances will have increased between Wave 1 and Wave 2. Some scenarios have changed with regards to their rankings over time in terms of being willing to provide an abortion. For example, in Wave 1, the scenario of a patient being pregnant

as the result of being raped by an unknown assailant was the third in which respondents were the most willing to provide an abortion. However, in Wave 2, this scenario dropped to being the 5th ranked reason. For Wave 2, Edward's Trisomy being detected in the fetal scan was the third highest ranked, moving from 5th ranked in Wave 1. Tay-Sach's being detected moved from 5th ranked to 4th. Generally, most scenarios remained within or close to their ranking from Wave 1, however the scenario in which a fetal scan detected Huntington's Chorea moved from the 19th to the 10th ranked scenario. The Wave 2 ranking more closely resembles the Krupa Culpability ranking of 9. Recall that the lower the number on the scale, the less culpability the patient is perceived to have for her pregnancy.

Next, to further explore the change in attitudes over time, I ran frequencies for these same 23 scenarios used in the culpability table and included the statistics for "refer to another physician" and "neither perform nor refer," which are presented in Table 5. This allowed me to see not only that willingness to perform increased in all of the scenarios, as the culpability statistics (Table 4) suggest, but also movement within all three categories of "perform," "refer to another physician," and "neither." The percentage of those unwilling to perform an abortion or refer decreased in all circumstances, except for a patient making the personal choice to abort a fetus in the third trimester, which increased 1 percent (15.80, 16.80 respectively) from Wave 1 to Wave 2. However, those willing to perform the abortion in this circumstance increased from 33.90 percent to 55.10 percent between the two samples. Strikingly, the most drastic decrease of unwillingness perform was in the context of a patient seeking an abortion for a pregnancy resulting from an extramarital affair. The percentage of those indicating that they would neither perform nor refer decreased from over half with 61.50 percent in Wave 1 to a little over a quarter, with 27.10 percent in Wave 2. The percentage of those indicating that they would

perform the abortion themselves increased dramatically from a mere 5.20 percent to 42.10 percent. Those indicating they would refer remained similar, with 33.30 percent of Wave 1 and 30.80 percent of Wave 2 respondents indicating that they would refer. The general movement from Wave 1 to Wave 2 for those not willing to perform the abortion but willing to refer to another physician was less uniform than the willing to perform or unwilling to perform or refer categories. For example, in the circumstance of a fetal test detecting the presence of Huntington's chorea, those willing to refer decreased from 46.90 percent in Wave 1 to 22.40 percent in Wave 2. However, the percentage of those willing to provide the abortion increased from 18.90 percent to 54.20 percent, suggesting that more people would be willing to provide the abortion rather than refer, which would explain a decrease in the percentage of those willing to refer. Another example where this occurred was in the context of the pregnancy causing a life-threatening kidney malfunction. Willingness to refer decreased from 40.50 percent to 15.90 percent, but willingness to perform the abortion increased from 54.30 percent to 79.40 percent, whereas the unwillingness to perform or refer decreased from 5.20 percent to 4.70 percent.

MULTIVARIATE RESULTS

Table 6 presents the results for the logistic regression performed for each wave of data. Based on prior research that found mixed results regarding gender as a significant predictor of abortion attitudes, I wanted to examine whether gender within the context of the medical field might be a predictor of abortion attitudes. The second hypothesis then, was that females would be more likely to be willing to provide abortion. Gender was not a significant predictor in either model, and therefore hypothesis 2 was not supported. However, the third hypothesis that respondents with stronger religious beliefs will be less willing to provide abortion was supported

for both waves, 2000 and 2015. Compared to those who self-reported not being religious, those who are religious had .284 lower odds of being willing to provide an abortion in Wave 1 ($p=.003^{**}$, $B=-1.259$). Similarly, respondents in Wave 2 reporting being religious had .191 lower odds of being willing to provide abortion ($p=.003^{**}$, $B=-1.654$). This follows previous research that has shown religious beliefs to have a significant impact on abortion attitudes (Shotorbani et al. 2004, Gleeson et al. 2008, Begun and Walls 2015).

Year in medical school was included in the model to test the fourth hypothesis, that those who were further in their education would be more likely to be willing to provide abortion. This hypothesis was based on previous studies that found pro-life attitudes to be significantly associated with year of study (Gleeson et al. 2008). Year in medical school was not significant for this study, thus, the hypothesis that those who are further in their medical school education would be more willing to perform abortion was not supported.

The fifth hypothesis, that students who have had exposure to abortion training in their curriculum will be more willing to provide abortion was based upon prior research that suggests that whether a student has been exposed to abortion training could impact their willingness to perform abortion in their practice (Aiyer et al. 1999, Hwang et al. 2005, Veazey et al. 2015). This variable was shown to be significant for Wave 2 in chi-square correlations, but when controlling for other factors included in the logistic regression model, it was not significant. The sixth hypothesis, that those who had more personal exposure to abortion would be more willing to provide abortion was supported, but only in the first wave of respondents ($p=.04^*$, $B=.629$). For this first wave, results show that for each unit increase in abortion exposure the odds of being willing to perform an abortion increase by 1.876.

CHAPTER V

DISCUSSION

The current political climate surrounding the issue of abortion in the United States is tempestuous. As mentioned above, despite the Constitutional protection guaranteed by *Roe v. Wade*, the assault on reproductive choice has been near constant since its passage in 1974. Thirty states introduced legislation that would ban abortion in 2017 (Nash et al. 2018). Despite this, the Guttmacher Institute has said that 2017 also saw “a dramatic upsurge in proactive efforts to expand access to abortion, contraception, other reproductive health services and comprehensive sex education or to protect reproductive rights” (Nash et al. 2018). Moreover, The American College of Obstetricians and Gynecologists (ACOG) reaffirmed last year that it supports access to safe abortion care for women, as well as abortion training and education for students, which they argue is essential for the former. The results of this study showed that few medical students had been exposed to abortion training, with only 20.90 percent in Wave 1 and 30.80 percent in Wave 2 indicating that they had. ACOG has expressed concern about limited training in medical schools on the topic of abortion procedures, citing a study by Eastwood et al. (2006) that found that “only 51% of obstetrics and gynecology residency programs offered routine abortion training (American College of Obstetricians and Gynecologists 2014). Additionally, as I mentioned above, there are no fixed requirements for abortion education in the United States and abortion training and curriculum differs throughout the country (Cessford and Norman 2011). This, along with the research by Espey et al. (2005) and Steinauer et al. (2009) detailed in Chapter II exposes a need for adequate and consistent training to ensure safe and legal abortion.

The current study revealed that, at least within the demographic of medical students, attitudes towards abortion are improving. For example, 31.80 percent of respondents in the 2015 sample indicated that they would perform an abortion for a patient concerned about being pregnant on her opening night as the star of a ballet, whereas only 15.90 percent were willing in the first sample. Moreover, respondents willing to provide a second-trimester abortion nearly doubled from 22.00 to 42.10 percent. The smallest increase in percentage of those willing to provide was for a patient desiring an abortion in the third trimester for her own personal choice, with an increase from 5.20 percent to 6.50 percent. Though this question provides the context of the decision being the woman's choice, this is rarely the circumstance in which third-trimester abortions actually occur. As previously mentioned, less than 1 percent of abortions occur after the 20-week mark and when they do, it is when a fetal anomaly has been found or the health of the mother is at risk (Planned Parenthood Action Fund 2018). Note that the third-trimester begins at the 25-week mark. As Table 4 demonstrates, more respondents in Wave 2 indicated a willingness to provide an abortion across circumstances, whether for fetal anomalies, a risk to the life of the mother, or a patient's personal reasons, which may suggest a higher willingness to accept a woman's choice for her legally protected right to an abortion.

The logistic regression results for Wave 1 revealed strength of religious beliefs to be a strong predictor of willingness to provide an abortion, along with abortion experience. Again, this suggests that those with stronger religious beliefs will be less willing to provide abortion, and those with more personal exposure to abortion in their lives will be more willing to provide. For the second wave, strength of religious beliefs was found to be a significant predictor when controlling for other variables as well. Previous research has suggested that religion is the most consistent predictor of abortion attitudes (Jelen and Wilcox 2003), so it is not surprising that this

is a significant predictor across both waves of data. However, a larger sample size could provide a clearer picture.

As with any research, there are limitations to the current study, but this also leaves room for future exploration. First, the small sample sizes of 177 students in the first wave and 107 in the second wave lessens the generalizability and external validity of the study. With the advent of the internet, email and web-based surveys have become a useful, low-cost tool for researchers with which to gather data (Laguilles et al. 2011). However, achieving high response rates for internet surveys is challenging, and they tend to be lower than mailed despite the ease of use that internet surveys offer (Laguilles et al. 2011, Millar and Dillman 2011). Moreover, Klabunde et al. (2013) notes that it has become increasingly difficult to gather information regarding physician practices, attitudes, opinions, and knowledge through survey instruments, as response rates to physician surveys are on the decline. Klabunde et al.'s (2013) review sought to examine what action health researchers can take to improve physician participation in surveys. Response burden can sometimes be related to response rate, with one study cited by Klabunde et al. (2013) finding that the length of a survey can result in a higher or lower response rate. While the current study surveyed medical students, it is logical to suggest that factors that would increase physician participation in survey research could also increase medical student participation. Furthermore, researchers were not allowed to offer an incentive to survey respondents, as the Institutional Research Board (IRB) believed that to be coercive. This is likely an example of an instance when social science research is subject to IRB scrutiny using a medical lens that is irrelevant to the field of social science. At their inception, IRBs were formed to protect human research subjects from physical and psychological harm in response to torture justified as medical research (Carpenter 2006). While IRBs are a necessary and important component of

ethical research, too often, they apply the strict standards set for clinical medical research to social science research which is often of a different nature and misunderstood by many IRBs (Carpenter 2006). Social scientists have expressed concern about IRB Common Rule regulations and the ways in which these regulations hinder social research (American Association of University Professors 2001). The allowance of researchers to offer incentives to participants could potentially reduce, at least to some extent, low response rates for online surveys, as research has shown incentives to be effective in doing so. For example, Laguilles (2011) found that lottery incentives significantly increased the response rates for internet surveys among college students, regardless of survey length, topic, or prize incentive. Moreover, these incentives seem to decrease the likelihood that a participant will drop out before completing the web-based survey.

Aside from increasing response rates, there are also ways to improve future survey instruments for abortion opinion research. First, as mentioned above, some research suggests that survey length may reduce response rates (Klabunde et al. 2013). The survey used to collect the data that this study uses for analysis had 43-items. Furthermore, the survey also did not include any indicators of religiosity other than self-perceived religious strength. Prior research has shown that frequency of religious attendance is a strong predictor of abortion attitudes, so a more thorough assessment of religiosity with more indicators would likely improve the reliability of the measure of religiosity (Jelen and Wilcox 2003).

Limiting the generalizability, the sample in this study was limited to one medical school in a more liberal area in a southeastern state. Furthermore, considering Steinauer et al.'s (2009) research that found that medical schools' coverage of abortion and contraception in the Southern United States to be lacking, it would be largely beneficial to examine the curriculum of medical

schools in this region even further. An updated analysis of abortion training in all medical schools nationally is necessary as well, to determine the extent to which training continues to be inadequate or if it has improved in the last decade. Finally, a more in-depth examination of the training given to OBGYN students and others in specialties where they are likely to encounter a patient seeking an abortion or pregnancy counseling is imperative. It is possible that if students are exposed to training early in their curriculum, there may be more students willing to provide them whether it is a standard procedure in their given specialty or not. Early training could potentially lead to more students being interested in providing such a service and could result in a more pro-choice climate, ensuring that women who need the service have access to it.

For future research, a closer look should be given to the ways in which stigma and fear impact a willingness to provide abortion. It could also be useful to examine what reasons physicians may have for referring a patient for an abortion but not being willing to provide the abortion themselves. This could potentially be related to stigmatization and fear, or other variables such as religious beliefs. Moreover, stigma and fear can be analyzed within a medical school setting to determine whether these prevent students from wanting to pursue abortion training. The American College of Obstetrics and Gynecologists (2014) argues that “integrated medical education and universal opt-out training policies help to lessen the stigma of abortion provision” because opt-out programs incorporate training on abortion procedures into routine residency programs but allow those with religious or moral objections to choose not to participate. ACOG further asserts that this improves safe abortion access by increasing the number of providers. Additionally, it is important to know that the data collected from the two samples in this study is within the context of hypothetical questions. It may be difficult to assume one what oneself will do as a practitioner and they are face-to-face with a patient. It’s

possible that those who believe they would refuse a patient a procedure may feel differently once they are faced with a patient who is requesting assistance. Conversely, one who feels adamant about providing abortion may have a more difficult time with it than they initially thought, despite their beliefs.

Abortion will likely remain at the forefront of American politics for decades to come. Whether or not *Roe v. Wade* serves its purpose relies on the accessibility of safe abortion, which depends on extensive and accessible abortion and contraception training, medical students who are willing to engage in such training, and physicians who are willing to guarantee this Constitutional right to those who seek it.

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APPENDIX A. TABLES

TABLE 1. Variable Distribution

	2000 N=177			2015 N=107				
		% or M	SD	Range	% or M	SD	Range	
<i>Dependent Variable</i>								
Willing to provide abortion?			0.49			0.43		
No	66	37.30			26	24.30		
Yes	111	62.70			81	75.70		
<i>Independent Variables</i>								
Gender			0.50			0.50		
Male	89	50.30			47	43.90		
Female	88	49.70			60	56.10		
Race			0.40			0.44		
White/European	141	79.70			79	73.80		
Non-White	36	20.30			28	26.00		
Age in Years		26.01	3.67	20-41		26	3.58	22-50
Minimum		20				22		
Maximum		41				50		
Year in Medical School		2.31	1.006	1-4		2.49	1.15	1-4
In a Union			0.45				0.47	
Partnered	49	27.70			34	31.80		
Not Partnered	128	72.30			73	68.20		
Strength of Religious Belief			0.46				0.50	
Not Very Strong	52	29.40			56	52.30		
Religious	125	70.60			51	47.70		
Received Abortion Training			0.41				0.46	
No	140	79.10			74	69.20		
Yes	37	20.90			33	30.80		
Area of Desired Specialty								
Abortion Not Possible	123	69.50			82	76.60		
Abortion Possible	54	30.50			25	23.40		
Personal Exposure to Abortion		0.80	0.59	0-2		0.65	0.62	0-2

Note: % and SD provided for categorical variables; Range, M and SD provided for continuous variables.

TABLE 2. Variables in the Study

Dependent Variable	Operationalization	Coding
Willingness to perform an abortion	Would you ever be willing to perform an abortion for a patient?	0=No; 1=Yes
Independent Variables		
Gender	What is your gender?	0=Male; 1=Female
Strength of Religious Belief	Would you say your religious beliefs are very strong, strong, somewhat strong, or not very strong?	0=Not very religious 1=Religious
Year in Medical School	What year of medical school are you in?	Given year (Continuous)
Exposure to Abortion Training	Have you received any training in abortion practices, indications, or procedure?	0=No; 1=Yes
Personal Exposure to Abortion	Have you had at least one personal acquaintance who has had an abortion?	0=No personal acquaintance who has had an abortion, Self or partner has not had an abortion 1=Either respondent knows acquaintance who has had an abortion and partner or self has not had an abortion, or respondent/partner has had an abortion, but no acquaintance. 2=Both self or partner has had abortion, and respondent knows someone who has had an abortion.
Control Variables		
Age	What is your age?	Given age (Continuous)
Race	What is your race?	0=White/European; 1=Non-White
Marital Status (Union)	What is your marital status?	0= Not partnered; 1=Partnered;
Area of Desired Specialty	In what area of medicine do you want to specialize?	0=Abortion not possible; 1=Abortion possible

TABLE 3. Bivariate Analysis of Independent Variables and Willingness to Provide Abortion

	Willing to Provide Abortion			2015(n=107)		
	2000 (n=177)		P	No	Yes	P
	No	Yes		No	Yes	
Age	25.64	26.23		1	6	
Race				24.7	75.3	
White	36.20	63.8		0	0	
Non-White	41.70	58.3		25.7	74.3	
Gender				0	0	
Male	39.30	60.70		26.4	73.6	
Female	35.20	64.80		0	0	
Year In Medical School	2.36	2.27		23.9	76.1	
Union				2.46	2.49	
Not Partnered	35.90	64.10		27.1	72.9	
Partnered	40.80	59.20		0	0	
Strength of Religious Belief			**	0	0	**
Not very religious	21.20	78.8		10.2	89.8	*
Religious	44.00	56.00		0	0	
Training				39.3	60.7	
No	38.60	61.40		0	0	
Yes	32.40	67.60		31.0	69.0	
Medical Specialty				0	0	
Abortion Not Possible	38.20	61.8		11.1	88.9	
Abortion Possible	35.20	64.8		25.0	75.0	
Abortion Experience	0.67	0.87	*	0	0	
				25.0	75.0	
				0	0	
				25.0	75.0	
				0	0	
				0.54	0.69	

Note: Percents are reported for categorical variables. Means are reported for continuous variables. (*p<.05. **p<.01. ***p<.001)

TABLE 4. Comparison of Rankings of Krupa Culpability Chart and Medical Students' Willingness to Perform Abortions (n=177)

Reason	T1		T2		
	Krupa Culpability Chart Ranking	Willing to Perform %	Willing to Perform Rank	Willing to Perform %	Willing to Perform Rank
Pregnancy has caused your patient a life-threatening kidney malfunction.	1	54.30%	1	79.40%	1
Your patient is a minor who is pregnant as a result of molestation by her father.	2	47.40%	2	72.90%	2
Your patient has been raped by an unknown assailant.	3	46.60%	3	67.30%	5
Edward's Syndrome (Trisomy 18) has been detected which will result in death within 6 months of birth.	5	45.40%	4	71.00%	3
Tay-sachs has been detected in your patient's fetus which will result in a painful death by ages of three to six years.	4	43.10%	5	70.10%	4
Spina-bifida has been detected in your patient's fetus which will cause paralysis from the waist down.	6	34.70%	6	57.00%	7
Your patient is requesting that you give her RU-486 (mifepristone) or methotrexate for a medical abortion as opposed to surgical abortion.	8	33.90%	7	55.10%	9
Your patient has made a personal decision to abort the fetus. She is in the 1st trimester (9-12 week old fetus) of her pregnancy.	7	33.90%	8	55.10%	8
Expectant cerebral palsy couple are requesting an abortion because they will be incapable of meeting their child's needs.	15	32.40%	9	60.70%	6
Your patient is requesting an abortion because she cannot afford another child.	11	32.00%	10	52.30%	12
Your patient has made a personal decision to abort the fetus.	12	31.10%	11	53.30%	11

TABLE 4 (Cont'd).

	Krupa Culpability Chart Ranking	Willing to Perform %	Willing to Perform Rank	Willing to Perform %	Willing to Perform Rank
Your patient is a grandmother who unexpectedly became pregnant in her late forties.	14	27.40%	12	51.40%	13
Your patient is in her fifth pregnancy and has requested an abortion.	16	26.90%	13	49.10%	14
Your patient is suffering from depression and experiencing suicidal thoughts due to her pregnancy.	10	26.30%	14	46.20%	16
Your patient is single and doesn't want to marry the man with whom she has become pregnant.	17	25.90%	15	45.80%	17
Your patient is requesting that you perform an abortion for her because her medical education will be jeopardized by pregnancy.	13	22.90%	16	47.20%	15
Your patient is pregnant as a result of an extra-marital affair.	18	22.40%	17	42.10%	19
Your patient has made a personal decision to abort the fetus. She is in the 2nd trimester (13-24 week old fetus) of her pregnancy.	20	22.00%	18	42.10%	18
Huntington's Chorea has been detected. Neurological deterioration will begin by 40 years old followed by death.	9	18.90%	19	54.20%	10
Your patient has been offered the starring role in the ballet, but without an abortion she will be 7 months pregnant on opening night.	19	15.90%	20	31.80%	20
A couple with 5 sons, desires a daughter. However, a fetal test reveals that they are going to have another male. They have requested that you perform an abortion.	22	5.70%	21	18.70%	21
Your patient has made a personal decision to abort the fetus. She is in the 3rd trimester (25-36 week old fetus) of her pregnancy.	21	5.20%	22	6.50%	23
A couple with one son is committed to having one child of each sex. A fetal test reveals they are going to have another male. They have requested that you perform an abortion.	23	4.50%	23	14.20%	22

TABLE 5. Descriptive Statistics for Willingness to Provide in Various Circumstances

	2000 %	N	2015 %	N
Your patient is single and does not want to marry the man with whom she has become pregnant.		174		107
Would Perform	25.90		45.80	
Refer	48.30		29.00	
Neither perform nor refer	25.90		25.20	
Your patient has made a personal decision to abort the fetus.		177		107
Would Perform	31.10		53.30	
Refer	53.10		29.90	
Neither perform nor refer	15.80		16.80	
Your patient has made a personal decision to abort the fetus. She is in the First Trimester (9-12 week old fetus) of her pregnancy.		177		107
Would Perform	33.90		55.10	
Refer	50.30		28.00	
Neither perform nor refer	15.80		16.80	
Tay-Sachs has been detected in your patient's fetus, which will result in a painful death by the ages of three to six years.		174		107
Would Perform	43.10		70.10	
Refer	46.00		24.30	
Neither perform nor refer	10.90		5.60	
Your patient is pregnant as the result of an extramarital affair.		174		107
Would Perform	5.20		42.10	
Refer	33.30		30.80	
Neither perform nor refer	61.50		27.10	
Your patient has made a personal decision to abort the fetus. She is in the Third Trimester (25-36 week old fetus) of her pregnancy.		174		107
Would Perform	5.20		6.50	
Refer	33.30		34.60	
Neither perform nor refer	61.50		58.90	

TABLE 5 (Cont'd).

	2000 %	N	2015 %	N
Your patient has been raped by an unknown assailant and as a result has become pregnant.		176		107
Would Perform	46.60		67.30	
Refer	44.30		25.20	
Neither perform nor refer	9.10		7.50	
A couple with one son is committed to having one child of each sex. A fetal test reveals that they are going to have another male. They have requested that you perform an abortion.				
		176		106
Would Perform	4.50		14.20	
Refer	31.80		32.10	
Neither perform nor refer	63.60		53.80	
Edward's Syndrome (Trisomy 18) has been detected in your patient's fetus which will result in death within six months after birth.				
		174		107
Would Perform	45.40		71.00	
Refer	44.30		23.40	
Neither perform nor refer	10.30		5.60	
Your patient has been offered the starring role in a ballet, but without an abortion she will be seven months pregnant on opening night.				
		176		107
Would Perform	15.90		31.80	
Refer	42.00		37.80	
Neither perform nor refer	42.00		30.80	
Huntington's chorea has been detected in your patient's fetus. Neurological deterioration will begin in the forties followed by death.				
		175		107
Would Perform	18.90		54.20	
Refer	46.90		22.40	
Neither perform nor refer	34.30		23.40	

TABLE 5 (Cont'd).

	2000 %	N	2015 %	N
Your patient has made a personal decision to abort the fetus. She is in the Second Trimester (13-24 week old fetus) of her pregnancy.		173		107
Would Perform	22.00		42.10	
Refer	52.00		32.70	
Neither perform nor refer	26.00		25.20	
Pregnancy has caused your patient a life-threatening kidney malfunction.		173		107
Would Perform	54.30		79.40	
Refer	40.50		15.90	
Neither perform nor refer	5.20		4.70	
Your patient is suffering from depression and experiencing suicidal thoughts due to her pregnancy.		175		106
Would Perform	26.30		46.20	
Refer	41.10		26.40	
Neither perform nor refer	32.60		27.40	
Your patient is in her fifth pregnancy and has requested an abortion.		175		106
Would Perform	26.90		49.10	
Refer	48.00		26.40	
Neither perform nor refer	25.10		24.50	
Your patient is requesting that you perform an abortion for her, because pregnancy could risk her not being able to finish medical school.		175		106
Would Perform	22.90		47.20	
Refer	45.70		31.10	
Neither perform nor refer	31.40		21.70	

TABLE 5 (Cont'd).

	2000 %	N	2015 %	N
Spina bifida has been detected in the fetus of your patient which will cause paralysis from the waist down.		176		107
Would Perform	34.70		57.00	
Refer	45.50		29.00	
Neither perform nor refer	19.90		17.00	
Your patient is a grandmother, who unexpectedly became pregnant in her late forties.		175		107
Would Perform	27.40		51.40	
Refer	45.70		29.90	
Neither perform nor refer	26.90		18.70	
Your patient is requesting an abortion because she cannot afford another child.		175		107
Would Perform	32.00		52.30	
Refer	44.60		25.20	
Neither perform nor refer	23.40		22.40	
An expectant cerebral palsy couple are requesting that you perform an abortion for them because they will be incapable of meeting their child's physical needs.		176		107
Would Perform	32.40		60.70	
Refer	48.30		23.40	
Neither perform nor refer	19.30		15.90	
A couple with five sons desires a daughter. However, a fetal test of their sixth pregnancy reveals that they are going to have another male. They have requested that you perform an abortion.		176		107
Would Perform	5.70		18.70	
Refer	35.80		33.60	
Neither perform nor refer	58.50		47.70	

TABLE 5 (Cont'd).

	2000 %	N	2015 %	N
Your patient comes to you requesting that you give her RU-486 (mifepristone) or methotrexate for a medical abortion, as opposed to a surgical abortion.		171		107
Would Perform	33.90		55.10	
Refer	47.40		27.10	
Neither perform nor refer	18.70		17.80	
Your patient is a minor who is pregnant as a result of molestation by her father.		175		107
Would Perform	47.40		72.90	
Refer	44.00		19.60	
Neither perform nor refer	8.60		7.50	

TABLE 6. Summary of Logistic Regression Analysis for Variables Predicting Willingness to Provide Abortion to a Patient for First Wave (n=177) and Second Wave (N=107) Respondents

Predictor	2000 (N=177)				2015 (N=107)			
	B	S.E.	Exp(B)	Sig.	B	S.E.	Exp(B)	Sig.
Age	0.041	0.06	1.04	0.48	0.00	0.080	1.00	0.95
Race	-0.14	0.41	0.87	0.73	-0.07	0.56	0.93	0.90
Gender	0.25	0.35	1.29	0.46	-0.04	0.52	0.96	0.94
Year In Medical School	-0.32	0.18	0.73	0.09	-0.24	0.28	0.78	0.38
Union Status	-0.39	0.4	0.68	0.33	0.75	0.60	2.11	0.22
Religious Strength	-1.23	0.42	0.28	0.00	-1.65	0.55	0.19	0.00
Abortion Training	0.49	0.45	1.63	0.28	1.12	0.76	3.06	0.14
Medical Specialty	0.07	0.38	1.07	0.86	0.16	0.59	1.17	0.79
Personal Experience with Abortion	0.63	0.31	1.88	0.04	0.29	0.46	1.33	0.53
Constant	0.55				2.18			
Nagelkerke R ²	0.14				0.23			

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

TABLE 7. Comparison of the Magnitude of Coefficients from Wave 1 and Wave 2

Variable	2000	2015	
	<i>b1</i>	<i>b2</i>	<i>Z=</i>
Age	0.041	0	0.41
Race	-0.14	-0.07	-0.1005
Gender	0.25	-0.04	0.46045
Year in Medical School	-0.32	-0.24	-0.2418
Union	-0.39	0.75	-1.573
Strength of Religious Beliefs	-1.23	-1.65	0.60654
Abortion Training	0.49	1.12	-0.7168
Medical Specialty	0.07	0.16	-0.1278
Abortion Experience	0.63	0.29	0.60862

Note: Results not significant, $p < .05^$*

APPENDIX B. SURVEY

Please mark or supply the appropriate response for each question.

1. What is your gender?

- Male Female

2. What is your age? _____

3. What is your race?

- White/European Black/African American Native American
 Hispanic Asian/Pacific Islander
 Bi-racial/Multi-racial _____ (Please specify)
 Other _____ (Please specify)

4. What year of medical school are you in?

- Medical Masters Year 1 Year 2 Year 3 Year 4

5. In what area of medicine do you want to specialize?

6. Of the following settings, where do you hope to practice?

- Urban Area Suburb Small Town
 Rural Area Other _____ (please explain)

7. What is your religious affiliation?

- Catholic Jewish Protestant _____ (Specify denomination)
 Atheist Agnostic Islamic
 Other _____ (Please specify)

8. Would you say your religious beliefs are Very strong, Strong, Somewhat strong, or Not very strong?

- Very strong Strong
 Somewhat strong Not very strong

9. What is your marital status?

- Single Divorced Cohabiting
 Widowed Married Separated

10. How many children do you have **now**? _____
11. How many children do you **want** to have? _____
12. Has abortion been a topic of discussion in any of your medical school training?
- No Yes
13. Have you received any training in abortion practices, indications, or procedure?
- No Yes

IF **YES**, what type of training have you received?

14. Would you ever be willing to perform an abortion for a patient?
- No Yes
15. Mark **ALL** of the reasons you **WOULD** be willing to perform an abortion:
- The mother's life is in danger.
 - It is my responsibility as a doctor.
 - My patient is too young to have a child.
 - My patient does not want others to know she had sex or is pregnant.
 - My patient is concerned about how having a child will change her life.
 - It is my responsibility to save women from receiving unsafe abortions.
 - My patient's husband or partner wants her to have an abortion.
 - My patient lacks the financial resources to raise another child.
 - My patient became pregnant due to birth control failure.
 - My patient is pregnant as a result of rape.
 - My patient is concerned about how having a child will interfere with her career and/or educational plans.
 - My patient is not ready to become a parent.
 - The fetus is not in the third trimester.
 - The fetus will suffer from fatal genetic defects.
 - My patient is too old to have a child.

- My patient has no partner to help her raise the child.
- My patient's parents want her to have an abortion.
- My patient is pregnant as a result of an extra-marital affair.
- My patient is unable to care for more children.
- My patient and her partner/spouse are having relationship problems.
- My patient has the right to have abortions if she wants one.
- My patient already has as many children as she wants.
- Other (Please explain)

I would **not** be willing to perform an abortion under **any** of these circumstances.

16. Mark **ALL** of the reasons you would **NOT** be willing to perform an abortion:

- Abortion is morally wrong.
- Abortion requires the killing of a human being.
- I will be isolated from the medical community.
- Abortion conflicts with my personal religious beliefs.
- I fear that I will be harmed by those opposed to abortion.
- I fear that my family will be harmed by those opposed to abortion.
- Abortion should not be used as a form of birth control.
- Providing abortions is not a financially lucrative career.
- If a woman has sexual intercourse, she must be willing to accept the consequences of her actions, especially a pregnancy.
- Other (Please explain)

I would be willing to perform an abortion under **any** of these circumstances.

In the following scenarios, a female patient of yours is pregnant and she has requested that you perform an abortion for her. Please indicate whether you would perform an abortion, **regardless** of your desired medical specialty, in the following scenarios. (**MARK** responses)

17. Your patient is single and does not want to marry the man with whom she has become pregnant.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

18. Your patient has made a personal decision to abort the fetus.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

19. Your patient has made a personal decision to abort the fetus. She is in the First Trimester (9-12 week old fetus) of her pregnancy.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

20. Tay-Sachs has been detected in your patient's fetus, which will result in a painful death by the ages of three to six years.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient to another physician for an abortion.

21. Your patient is pregnant as the result of an extramarital affair.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

22. Your patient has made a personal decision to abort the fetus. She is in the Third Trimester (25-36 week old fetus) of her pregnancy.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

23. Your patient has been raped by an unknown assailant and as a result has become pregnant.

- I would perform an abortion.
 - I would not perform an abortion, but I would refer my patient for an abortion.
 - I would not perform an abortion, nor refer my patient for an abortion.
24. A couple with one son is committed to having one child of each sex. A fetal test reveals that they are going to have another male. They have requested that you perform an abortion.
- I would perform an abortion.
 - I would not perform an abortion, but I would refer my patient for an abortion.
 - I would not perform an abortion, nor refer my patient for an abortion.
25. Edward's Syndrome (Trisomy 18) has been detected in your patient's fetus which will result in death within six months after birth.
- I would perform an abortion.
 - I would not perform an abortion, but I would refer my patient for an abortion.
 - I would not perform an abortion, nor refer my patient for an abortion.
26. Your patient has been offered the starring role in a ballet, but without an abortion she will be seven months pregnant on opening night.
- I would perform an abortion.
 - I would not perform an abortion, but I would refer my patient for an abortion.
 - I would not perform an abortion, nor refer my patient for an abortion.
27. Huntington's chorea has been detected in your patient's fetus. Neurological deterioration will begin in the forties followed by death.
- I would perform an abortion.
 - I would not perform an abortion, but I would refer my patient for an abortion.
 - I would not perform an abortion, nor refer my patient for an abortion.
28. Your patient has made a personal decision to abort the fetus. She is in the Second Trimester (13-24 week old fetus) of her pregnancy.
- I would perform an abortion.
 - I would not perform an abortion, but I would refer my patient for an abortion.
 - I would not perform an abortion, nor refer my patient for an abortion.
29. Pregnancy has caused your patient a life-threatening kidney malfunction.
- I would perform an abortion.
 - I would not perform an abortion, but I would refer my patient for an abortion.

- I would not perform an abortion, nor refer my patient for an abortion.
30. Your patient is suffering from depression and experiencing suicidal thoughts due to her pregnancy.
- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.
31. Your patient is in her fifth pregnancy and has requested an abortion.
- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.
32. Your patient is requesting that you perform an abortion for her, because pregnancy could risk her not being able to finish medical school.
- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.
33. Spina bifida has been detected in the fetus of your patient which will cause paralysis from the waist down.
- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.
34. Your patient is a grandmother, who unexpectedly became pregnant in her late forties.
- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.
35. Your patient is requesting an abortion because she cannot afford another child.
- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.
36. An expectant cerebral palsy couple are requesting that you perform an abortion for them because they will be incapable of meeting their child's physical needs.
- I would perform an abortion.

- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

37. A couple with five sons desires a daughter. However, a fetal test of their sixth pregnancy reveals that they are going to have another male. They have requested that you perform an abortion.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

38. Your patient comes to you requesting that you give her RU-486 (mifepristone) or methotrexate for a medical abortion, as opposed to a surgical abortion.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

39. Your patient is a minor who is pregnant as a result of molestation by her father.

- I would perform an abortion.
- I would not perform an abortion, but I would refer my patient for an abortion.
- I would not perform an abortion, nor refer my patient for an abortion.

40. Over your lifetime, how many sexual partners have you had? _____

41. Have you or your sexual partner at the time ever been pregnant?

- No
- Yes

42. Have you had at least one personal acquaintance that has had an abortion?

- No
- Yes

43. Have you or your current sexual partner ever received an abortion?

- No
- Yes

VITA

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EDUCATION

M.A. Applied Sociology, 2018 (Expected)
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