

The Relationship between Attitudes about Abortion and Cognitive Complexity

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ABSTRACT

Attitudes about abortion have been studied in relation to many variables. This study seeks to discover the relationship between abortion attitudes and cognitive complexity. Cognitive complexity is a measure of an individual's ability to see situations as multifaceted. Sixty-three unmarried and childless undergraduate females were given an attitude about abortion scale which included ten items as well as a test of cognitive complexity modified from Hunt, Bulter, Noy and Rosser's Assessing Conceptual Level by the Paragraph Completion Method (1978). The results were expected to be an inverse u-shaped with those scoring high on cognitive complexity scoring in the mid-range on the attitudes about abortion scale while those scoring low on the measure of cognitive complexity scoring on one of the extreme ends of the attitudes about abortion scale. This result was expected because the intermediate range on abortion attitudes may mean that those individuals are willing to look at each situation individually instead of just on the basis of a strong pro-life or pro-choice attitude. In contrast to expectations, the results show no relationship between the two variables; however, there were significant differences in responses to the items about abortion, dependent on the type of scenario.

INTRODUCTION

The procedure of medical abortion has been legal since 1973 in the United States. When the *Roe v. Wade* decision was handed down from the Supreme Court, it added to the ongoing controversy in this country over abortion. Women had been getting illegal abortions until this time, so the debate over women's right to choose shifted to another level. (See Palmer, 2002, for a complete history of abortion.) The debate about abortion frequently leads to controversy as many people have exceptionally strong feelings about abortion. The present study focuses on correlates of attitudes toward abortion.

Abortion attitudes

Most people's abortion attitudes are fairly extreme, either pro-life or pro-choice; few people are neutral about the topic. Hollis and Morris (1990) found that most abortion attitudes were at one of the extreme ends, only 28.9% of people surveyed were found to have intermediate attitudes about abortion. When doing their research, they used a seven point, Likert-type scale with hopes of increased variance in the responses. They felt that giving participants a chance to answer on a scale of one to seven would bring forth more answers in the middle range, showing the general ambivalence they thought was felt by a lot of people about abortion. However, the researchers still found polarization of opinions. Most individuals clustered at the low end, always disagree with abortion (answering 1-3 on all scenarios) or on the high end, always agreeing with abortion (answering 6-7 on all scenarios.) Additionally, Werener (1983) found that the vast majority of respondents could easily be categorized into one of four categories (principled pro-choice, practical pro-choice, principled pro-life, practical pro-life) suggesting that individual's beliefs about abortion tend to be very distinct and uncompromising.

Correlates of abortion

Given the significant variation in abortion attitudes between people, it is important to understand the factors that are associated with the variations in attitudes. Many factors have been associated with attitudes towards abortion. Some of these factors include religion and degree of religiosity, knowledge of abortion, age, gender, and previous abortion experience (Esposito and Basow, 1995; Hollis and Morris, 1990). Esposito and Basow (1995) found that those more accepting of abortion tended to be less religious, non-Catholic, older, and more knowledgeable about

abortion. Alternatively, those individuals in the group which were least accepting of abortion were highly religious, Catholic, younger, and less knowledgeable about abortion. Individuals with first or second-hand experience with abortion tended to have more liberal attitudes about abortion than those that did not have any experience with abortion. No consistent relationship was found between attitudes about abortion and gender (Corenblum, 1973; Esposito and Basow, 1995).

Cognitive complexity

One variable that may have a strong relationship with attitudes about abortion that appears not to have been studied is cognitive complexity. Cognitive complexity is the sum of an individual's background, views and beliefs that are then used to make sense of the world around them. For example, someone who would be described as highly cognitively complex about music might think about music on many different levels; the tone, rhythm, notes, etc. A cognitively simple approach to music might consist only of the words to a particular song and not much else. Those same two people could have a different complexity level about a different topic. For example, a cognitively complex approach to music might be accompanied by simple ideas about politics while the cognitively simple view of music may coincide with complex thought about politics (Griffin, 1994; Littlejohn, 1992).

Complexity will cause an individual to look at things, people, and situations at more than face value (Littlejohn, 1992). Goldsmith and Nugent (1984) believe "greater cognitive complexity allows more cognitively complex individuals to perceive more readily the advantages of a particular innovation, to resolve difficulties in compatibility better, to view innovations as simpler, and to require less observability and trying out than less complex individuals, which predisposes them to early adoption of new things" (p. 55). This explanation should clarify why cognitive complexity and attitudes about abortion may be correlated. When a person is open to new ideas, he or she may break from dogmatic thinking about a particular idea. Those with intermediate attitudes about abortion may have thought through all options and be open to ambiguity, instead of clinging to one idea that they believe is correct.

Correlates of cognitive complexity

In previous research, cognitive complexity has been studied in relation to factors such as dogmatism (Rouff, 1975), measures on the least-preferred-co-worker-scale (Hoffman and Roman, 1984), and sensation seeking (Domangue, 1984). Rouff (1975) found that the more complex an individual is, the less dogmatic he or she is. Domangue (1984) found those with a high need for sensation seeking also tend to develop a highly complex thinking process. One of the more interesting studies of cognitive complexity was Hoffman and Roman's (1984). They studied the relationship between cognitive complexity and the least-preferred-co-worker-scale, a measure of task or relationship orientation towards co-workers. Individuals with poor relationships with their co-workers (task orientated) were hypothesized to see only the negative aspects of their co-worker's personalities; those with good relationships (relationship orientated) were hypothesized to see both the bad and good aspects of that co-worker. In addition, those with high cognitive complexity were thought to be more likely to have good co-worker relationships. The argument is that these individuals are more likely to be able to see the "shades of gray" involved in others' personalities instead of viewing their co-workers in only one light. However, it was not just those with good relationships with co-workers that scored high on cognitive complexity; those that scored low on the relationship orientation towards their least favorite co-worker were found to have higher cognitive complexity scores than those that had somewhat better relationships with co-workers. The results give an example of a u-shaped relationship because those with extreme attitudes (either high or low) about a co-worker scored higher on levels of cognitive complexity.

Current study

Following the logic of Hoffman and Roman's research, the current study applies cognitive complexity to abortion attitudes. It is expected that individuals with high levels of cognitive complexity may be better able to see the middle ground of the abortion issue. Therefore, they may be more likely to identify as having intermediate attitudes about abortion, as opposed to either extreme. An inverse u-shaped relationship is expected where individuals who are either very pro-life or pro-choice will tend to have lower cognitive complexity. The current research asked respondents to assess several different abortion related scenarios. As stated above, it was expected that highly cognitive complex individuals would show more variation in scores across the different scenarios (resulting in an intermediate level abortion attitudes score) as they are more able to look at each situation critically and make a decision based on information, not the principle of being pro-choice or pro-life.

METHOD

Participants: Sixty-three female, undergraduate UW-La Crosse students participated in the study. All received one extra credit point in their Psychology class. All participants were unmarried and without children at the time of the study. Forty-four (69.8%) were freshmen, eleven (17.5%) were sophomores, seven (11.1%) were juniors, and one (1.6%) was a senior. The average age was 18.86 ($SD = .88$). Sixty-one (96.8%) were Caucasian, with the remaining two participants identifying as Hispanic American. The majority of respondents were Protestant or Catholic (44.4% and 41.3%, respectively) with the others reporting “other” or “none” for religion. One person had an extreme score on the measure of cognitive complexity (i.e., 3.95 standard deviations above the mean) and so was excluded from further analysis, leaving a final participant number of 62. In addition, four surveys had to be excluded before being included in analysis because of incomplete responses.

Materials: The participants were given a packet which included the measure of cognitive complexity, an abortion attitudes scale, and a demographic information sheet. An adapted form of Assessing Conceptual Level by the Paragraph Completion Method (Hunt, Butler, Noy, and Rosser, 1978) was used as the measure of cognitive complexity. The original measure has six questions for the respondents to reply to; the current study adapted it to three questions: “when I think about rules”; “when someone does not agree with me”; “when I am not sure”. The abortion attitude scale consisted of ten statements and asked the participant to relate level of agreement with abortion for each circumstance with one being strongly disagree and seven being strongly agree (Appendix). Seven of the ten circumstances have been used in previous studies (Esposito & Basow, 1995; Hollis & Morris, 1990) and three were created specifically for this study (noted in the table). The demographic sheet asked basic information about the participants such as age, religion, degree of religiosity, and ethnicity.

Procedure: The participants signed up for one thirty-minute data collection session. The researcher first explained the procedure by reading the informed consent sheet aloud, as well as giving a copy to each participant. The researcher read the instructions and the procedure began with the adapted Hunt et al. (1978) measure. Participants had two minutes to respond to each of the three open-ended questions. After completing all three questions, the participants then responded to the ten statements on the attitude about abortion scale. Finally, participants completed the demographic sheet. After the participants were finished they were given a debriefing sheet and thanked. The researcher was trained to analyze the measure of cognitive complexity according to standards in Hunt et al.’s (1978) manual. The possible range of scores was 0-9 on the measure of cognitive complexity and 10-70 on the attitudes about abortion questionnaire. Coefficient alpha based on current data is .52 for cognitive complexity and .94 for attitudes about abortion.

Results

I used curvilinear regression (quadratic) to predict attitudes about abortion from cognitive complexity. I expected that those with high levels of cognitive complexity would have intermediate attitudes about abortion. Additionally, I expected that those with low levels of cognitive complexity would exhibit extreme (on either end) attitudes about abortion. The equation was not significant [$F(.59) = 1.17, p = .32$]. The trend of the data seems to support a curvilinear relationship, however, measurement limitations may have prevented the specificity needed to detect the relationship. Specifically, the limited number of items in the cognitive complexity scale led to a significant amount of measurement error (coefficient alpha = .52).

I also examined differences in responses to each abortion item using a repeated measures ANOVA. Results were significant [$F(9, 53) = 28.17, p = .00$]. Pairwise comparisons suggested four groups of items. Midpoint of the attitudes about abortion scale is four, so means greater than four suggest agreement with abortion. Participants were most willing to endorse abortion when the woman had been raped, the health of the mother was in danger, or there were significant risks for serious damage to the baby. Even so, the mean scores for these three circumstances were near the midpoint of the scale, suggesting participant’s endorsement was not overwhelmingly positive. Alternatively, participants were not at all supportive of abortion when the mother was married and wanted no more kids, when the woman does not want to marry the man who got her pregnant, or when the woman had undergone a previous abortion. The other two groups were below the midpoint, suggesting disagreement with abortion, but not as strong in magnitude as the previous group. These two groups included: the woman is too poor to support a baby, the woman has made a personal decision to abort, the woman is a junior in college and hoping to go to graduate school, and the woman is mentally handicapped. (See Table 1)

Table 1. Attitudes about Abortion Items and Scores

Items	Mean	SD	Minimum	Maximum
Health of mother	4.85 _a	1.77	1.00	7.00
Damage to baby	4.56 _a	2.07	1.00	7.00
Victim of rape	4.67 _a	2.09	1.00	7.00
Married, wants no more kids	1.82 _b	1.21	1.00	5.00
Does not want to marry man	2.06 _b	1.57	1.00	6.00
Previous abortion*	1.90 _b	1.42	1.00	6.00
Too poor	2.89 _c	1.93	1.00	7.00
Personal decision	2.79 _c	2.01	1.00	7.00
Junior in college – grad school*	2.65 _c	1.85	1.00	7.00
Mentally handicapped*	3.31 _d	1.93	1.00	7.00

Notes: means with different subscripts are significantly different ($p < .05$). Possible range for all items was 1 (strongly disagree with abortion for given circumstance) to 7 (strongly agree with abortion for given circumstance). Items with asterisk (*) indicate items researcher included which were not found in any previous research.

DISCUSSION

The most interesting results were how the participants scored each of the ten items of attitudes about abortion. Seven of the ten situations on the attitudes about abortion scale have been used in previous research, and this study found responses similar to those in previous studies. The researcher included the three others situations that were not found in any of the research used for background for this study: the woman had a previous abortion, the woman is a junior in college and hoping to go on to graduate school, and the woman is mentally handicapped. The researcher included these situations in an attempt to analyze situations that have not been measured before and see how the participants rate those situations. Special interest was given to the situation where the woman had an abortion previously and the woman was a junior in college. The researcher was interested in if participants were more accepting of abortion if it was her first abortion verses if she had a previous abortion. In addition, the condition of junior in college, hoping to go on to graduate school was interesting because it was supposed to create a situation that was believable for the participants to see themselves in and perhaps creating more accepting attitudes.

Because of the way the participants answered the questions on abortion, the scenarios broke themselves into four different groups. The first group of items included those items which had the highest mean scores out of 7. The group included: the health of the mother is in danger, there are significant risks for serious damage to the baby, and the woman was a victim of rape. The scenarios had means of 4.85, 4.56, and 4.67, respectively (see Table). Because the scale was 1-7, four is the median point of the scale. Because all three of these scenarios had means higher than four, the majority of the participants were willing to agree with abortion for these circumstances. The interesting fact about all three of these scenarios is that it takes the responsibility for the pregnancy or possible abortion off of the mother and places it on external figures. The participants seem to agree with abortion more readily when they do not perceive the pregnancy to be the woman's responsibility.

Alternatively, the second group of items included three items with the lowest mean scores: the woman is married and wants no more kids; the woman does not want to marry the man; and the woman had a previous abortion. The means for this group were 1.82, 2.06, and 1.90, respectively, suggesting that most participants did not agree with abortion for this circumstance at all. Just as the group in which abortion was accepted pretty highly because the responsibility was taken off the woman, the three scenarios which fit into this category seem to place the responsibility solely on the woman. The scenario where the woman was said to have had a previous abortion is especially interesting, because the low level with agreement seems to show that the participants believe women get one chance.

According to Esposito and Basow, people in the current study have similar views as those in their study. They found highly religious, Catholic, younger, and less knowledgeable about abortion to be the least accepting of abortion (1995). The group of participants in the current study had a mean age of 18.86 and a mean of 4.57 on religiosity with a standard deviation of 1.18 so the majority of respondents were above the midpoint on the religiosity scale. About 42% of the sample was Catholic. There was no question on the measure to assess their knowledge of abortion. The researcher felt that it was too personal of a question that may make some participants uncomfortable and answer untruthfully.

Numerous factors may have contributed to the results found in the current study. Additionally, there are a number of changes that should be made to the current study if it is to be administered again.

The participants were given two minutes to complete each sentence on the measure of cognitive complexity. At the end of each two-minute segment, the researcher said “two minutes is up, please turn the page”. Some participants stopped their thoughts in mid-sentence to turn to the next page. Other participants continued to write, disregarding instructions. This discrepancy may have contributed to some scoring inaccuracy. A phrase like “please finish your thought” before “time is up” may have helped clear this up. This discrepancy in finishing thoughts may effect how the item was coded; some people may have got higher scores because they took extra time to finish their thought while others may be disadvantaged in comparison because they ended their thought when told to do so.

Abortion was not clearly defined for the participants. The participants had to respond to level of agreement with abortion without any reference point to what stage of pregnancy the woman was in. There may be differences of opinion based on if the abortion was early or late term. Although the results may have been swayed, the idea behind the current study was to measure the correlates of abortion overall, not focusing specifically on early or late term.

Perhaps the biggest problem in the research is that the internal consistency of the measure of cognitive complexity was low due to a small number of items. The original Hunt et al. (1978) method was modified from six items to three, for length. This modification did help for length, but in the process, brought down the consistency of the measure because of the low number of items. Using the full six items included in the original measure could increase the internal consistency of the cognitive complexity measure, thereby, making the results more reliable.

I believe that this line of research is interesting and should be followed up to assess correlates of abortion attitudes. With the debate in the United States over abortion, activists on either side of the issue need to be aware of what factors influence people’s attitudes about abortion. The research should be expanded on by including the ten abortion scenarios in the current research as well as additional situations to obtain an accurate sampling of possibility and respondent’s attitudes.

If cognitive complexity is to be studied in relation to attitudes about abortion again, the measure of cognitive complexity used in the current research could be used again, but should not be shortened for length. In order to get an accurate assessment of the participant’s cognitive complexity level, all six items should be included.

The relationship between attitudes about abortion and cognitive complexity should continue to be studied, with the above mentioned changes. Because the results show that the trend of the data seem to support my initial hypothesis, with specific changes in the administration and scoring, I believe that a stronger relationship between the two variables will be found.

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APPENDIX

Attitudes about Abortion Scale

Please indicate your level of agreement with abortion for each of the following circumstance with one being strongly disagree for the given circumstance and seven being strongly agree for the given circumstance.

- | | | | | | | | |
|-----|------------------------------------------------------------------------------|---|---|---|------------------|---|---|
| 1. | The health of the mother is in danger | | | | 5 | 6 | 7 |
| | 1 | 2 | 3 | 4 | | | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 2. | There are significant risks for serious damage to the baby | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 3. | The woman is married and wants no more children | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 4. | The woman is a victim of rape | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 5. | The woman is not married and doesn't want to marry the man | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 6. | The woman is too poor to support a baby | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 7. | The woman has made a personal decision to abort | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 8. | The woman has had a previous abortion * | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 9. | The woman is a junior in college and is hoping to go on to graduate school * | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |
| 10. | The woman is mentally handicapped * | | | | | | 7 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| | (strongly disagree) | | | | (strongly agree) | | |

* indicates the scenarios which the researcher added which were not based on any previous research