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### Implicit Bias and Voluntarily Childfree Adults

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## ABSTRACT

This quantitative study aimed to determine if there is a negative bias towards voluntarily childfree adults or an association of negative views and attitudes with voluntarily childfree adults, controlling for other participant characteristics such as race, religion, or sexual orientation. At this stage in the research, voluntarily childfree adults are generally defined as legal adults who have the intention to remain childfree for the rest of their lives, due to reasons other than fertility issues. A negative view or bias is defined as any attitude which is not a desirable interpretation of behavior or lifestyle. A negative bias against voluntarily childfree adults was demonstrated through the administration of the Childfree Implicit Bias Test, a modified version of the Implicit Bias Test used to measure this topic. The null hypothesis was that there would be no negative bias towards voluntarily childfree adults. Significant correlation was found between those who self-identified as parents and those who showed bias in the Implicit Bias Test, and between older participants and bias. Further research is necessary to explore this topic further.

Implicit Bias and Voluntarily Childfree Adults

A Thesis

Presented to

The Faculty of The Department of Marriage and Family Studies

Abilene Christian University

In Partial Fulfillment

of the Requirements for the Degree

Masters of Marriage and Family Therapy

By

Virginia Elizabeth Powell

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This thesis, directed and approved by the committee for the thesis candidate Elizabeth Powell, has been accepted by the Office of Graduate Programs of Abilene Christian University in partial fulfillment of the requirements for the degree

Master of Marriage and Family Therapy

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May 15, 2020

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Joanna Mendez-Pounds

To everyone experiencing bias and negative reactions for their choice to remain  
voluntarily childfree.

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## CHAPTER I

### INTRODUCTION

#### **Implicit Societal Bias Regarding Voluntarily Childfree Adults**

Within our current society many assume once a couple marries, they will proceed in time to parenthood. More and more, however, couples are challenging this idea by remaining voluntarily childfree throughout their lifetimes. Voluntarily childfree couples report higher marital satisfaction, higher levels of marital adjustment, and more companionate marriages than their parental counterparts (Hoffman & Levant, 1985). There is more research currently on women in voluntarily childfree couples of various sexual orientations than men, and the research regarding childfree men is often lacking. Childfree heterosexual women have the highest relationship satisfaction out of women, followed by childfree lesbian women, and trailed by childfree bisexual women (Coffey, 2007). Coffey asserted in this article that these populations could have even higher relationship satisfaction if schools stopped pushing the idea that having children was a part of the “normal” life cycle from such a young age.

Freedom, and wanting to retain the freedom they have, was cited by women as the most driving factor for the decision to remain childfree (Gillespie, 2003). Voluntarily childfree couples have been found to measure high in independence, low in agreeableness, and low in extraversion. Avison and Furnham hypothesized that the choice to remain childfree might be a result of these traits (2015). Allen and Wiles argued that trying to find one definition or idea of “childfree” is impossible, due to the infinite

paths someone could take to reach that decision, and the huge number of reasons they may remain childfree (2013).

### **Need for More Research**

There is a deficit in the literature for treating voluntarily childfree couples in therapy, though the gap in research is growing smaller as time goes on. Older articles in the United States, before about 2005, use “childless” to describe people without children. The modern word choice, “childfree,” seeks to avoid stigmatization of that choice, since “childless” implies the individual is missing something from their lives. European articles, however, still favor “childless” as their descriptor, even into very recent years. Across Europe, including Russia, views toward childfree individuals and couples seem more severe, especially in Russia, where the majority believe that being childfree is a threat to society (Salyakhieva & Saveleva, 2017). Voluntarily childfree couples may also feel a sense of those around them waiting for them to change their minds, in that many expect voluntarily childfree couples to experience feelings of regret. For example, Delyser’s 2011 article is titled “At Midlife, Intentionally Childfree Women and Their Experiences of Regret,” but in the article Delyser did not find any women with actual feelings of regret, just two women who worried they might regret the decision in the future. Despite the data, the title implies that the regret is widespread among voluntarily childfree women, an idea which is prevalent throughout current society. The pressure to have children from friends, family, and even random people throughout work and support systems in this society can be enormous. In addition to these biases, voluntarily childfree individuals also face stigma within academia. While in the United States the language is changing to be more inclusive, there are still few theories of families and the life cycle

which include those who are childfree. Lee and Schaninger (2003) asserted that because of these differences, and the countless others not yet measured, these childfree and households with children are too different to be lumped together when it comes to data sets for future articles.

## CHAPTER II

### LITERATURE REVIEW

#### **Pressure from External Sources**

One of the largest and most all-encompassing issues voluntarily childfree couples may face is the pressure from societal sources. For example, Koropecykj-Cox, Romano, and Moras found that the students they surveyed had negative feelings towards a childfree couple when their childfree status was perceived as permanent (2007). If the couple was trying to have children and in a sense “rectify” their childfree status, however, the students had no negative perceptions towards them. Voluntarily childfree couples experienced negative associations like this throughout society and notice them. Similarly, to societal pressures, moral outrage can also be directed towards voluntarily childfree couples. Voluntarily childfree couples were perceived to live less fulfilling lives than couples with children, and were considered less psychologically fulfilled than parents by respondents in one research study (Ashburn-Nardo, 2016). Higher levels of sexism and religiosity can be predictive of more negative feelings towards childfree people (Husnu, 2016). Women without children are often viewed as lesser by many in society. More specifically, in 2016 mothers were found to be the most admired by the mostly female undergraduate psychology students at Virginia Commonwealth University (Husnu, 2016). Mothers elicited feelings of helpfulness, while childfree women inspired feelings of disgust, envy, and harmful behaviors (Bays, 2016). Childfree men and women in New Zealand were also viewed as immature, materialistic, unfulfilled, and lonely. These

attitudes have largely remained unchanged since the 1990s (Riley, 2011). Mueller and Yoder found that one stigma in our society is against those with non-normative family sizes. Both households with no children and households with many children faced similar levels of stigmatization (Mueller & Yoder, 1999). Voluntarily childfree couples face stigma in part because they did not conform to what our society has decided is normal: a heterosexual household with about two children, for example (Mueller & Yoder, 1999). Voluntarily childfree couples and individuals also experienced marginalization due to their decisions not to have children (Edalati & Ridzuan, 2010). Stigma and pressure can arise from those who should be a source of constant comfort, like families.

### **Femininity and Childfree Women**

Gillespie (2003) explored the issue of femininity and childfree status, something that women in voluntarily childfree couples may struggle with. Many participants would not consider a woman feminine, or fully a woman, until she has children (Gillespie, 2003). For example, Glenn states that in Western society motherhood is very important in determining adult femininity and that mothering is considered central to being a woman (1994). Young girls in our current society and climate are given dolls and expected to be excited when they see babies, and from the moment a woman begins to date seriously she is reminded that her biological clock is ticking. Often motherhood is considered the greatest thing a woman can do with her life, a message which may be grating and difficult for a childfree woman to hear. Women who are childfree are also considered less caring, lower in warmth, more driven, and less emotionally healthy than women who have children (Mueller & Yoder, 1999). Women are especially pressured with this, considering being a mother has been the primary role of women for centuries. While



there are many reasons why a couple may choose to remain childfree, femininity is likely not a factor. Gillespie (2003) reported that loss of freedom was cited by women as one of the reasons to remain childfree (specifically childfree British women, 21 to 50 years old). Women who were interviewed by Settle and Brumley (2014) also talked about personal freedom motivating them to remain childfree. They also expressed worries about another person being dependent on them for their entire lives (Settle and Brumley, 2014).

Laurent-Simpson (2017) wrote about the “motherhood mandate” in the United States, in that the expectation to have children is inseparable from the concept of femininity. Eicher et al. found that in Europe there were high negative feelings towards both childfree women and mothers who worked full time when their children were young (2015). Men, meanwhile, were judged far less for being either childfree or a working parent (Eicher et al. 2015). Men also face their share of judgement, however. In Germany heterosexual men are more likely to express a desire to have children than homosexual men, largely because when homosexual men express their desire for children they are met with negative reactions, while heterosexual men are societally pressured to have children their entire lives (Kranz, Busch, & Niepel, 2018). In the United States these results are very similar. A lower percentage of homosexual respondents expressed the desire to become parents, citing societal disapproval and the increased number of hurdles to cross to have a child while in a same sex relationship (Tate, Patterson, & Levy, 2018).

### **Race and Childfree Women**

Not only do childfree women face issues related to their femininity when choosing not to have children, they also may face issues regarding their race. Vinson, Mollen, and Smith (2010) found that black women were viewed more negatively than

white women if they did not have children. This article also reflected results reported by Koropecykj-Cox et al., which stated that men who were childfree husbands were viewed as less psychologically healthy than fathers, but women were viewed negatively especially if they were childfree by choice, and less so if they faced fertility issues (2007). Regardless of the reason everyone in the relationship was viewed as less psychologically fulfilled and were assigned more negative traits than their parental peers. Koropecykj-Cox et al. (2007) also found that the childfree status was perceived by both men and women who were surveyed as the woman's decision, which the authors hypothesized was evidence that fertility was the most likely reason couples were childfree. Koropecykj-Cox et al. (2007) did say that more important than the issue of race was the issue of the stability of the couple as perceived by those who were interviewed. While race played a role, the decision as to whether the couple was stable in their relationship and finances was more important when gauging negative feelings. The more recent research by Vinson, Mollen, and Smith, however, found significant differences in perception based on race (2010). More specifically, the childfree woman in an example couple in the questionnaire was rated significantly lower than a similar woman in a couple with children in stereotypical positive traits for women, and African American women were without children were ranked lower than Caucasian women who did not have children (Vinson et al. 2010). The rankings based on race were not affected by the reviewer's race, and sex of reviewer did not impact results since all those surveyed were women.

## **Differences Between Childfree Adults and Parents**

One article reported that voluntarily childfree couples differed from their parental peers in attitudes, sex and gender roles, and values (Lee & Schaninger, 2003).

Additionally, Gold (2013) explored the current definitions of family, and how those may be damaging to voluntarily (or even involuntarily) childfree couples. This expectation of children to create a family is another example of the unspoken pressure couples feel to have children and can be quite damaging, especially to the therapeutic relationship. Gold (2013) encouraged mental health professionals to step back and redefine terms they have used for long periods to be more inclusive to voluntarily childfree couples. Pelton and Hertlein supply another tool for mental health professionals who see voluntarily childfree couples, a new life cycle for the couple to move through (2011). Pelton and Hertlein (2011) proposed that a voluntarily childfree couple has a four-part life cycle: making the decision to be childfree, managing stigma and pressure, defining a personal identity, and building a support system and leaving a legacy.

While possibly living similar lives, there are some differences between voluntarily childfree couples and couples with fertility issues. A large predictor of marital happiness (according to Feldman) is being able to make the informed choice about whether to have children or not (Feldman, 1981). In his research Feldman found that parents who chose to become parents after a period of acceptable birth control had similar levels of marital satisfaction to couples who chose to remain childfree, as opposed to couples who wanted children but had infertility issues (Feldman, 1981). While childfree couples have higher levels of marital adjustment than their parental colleagues, the most important factor overall is the choice (Hoffman & Levant, 1985). A couple who is

infertile and a couple who has an accidental pregnancy will have similar levels of satisfaction (low), while couples who choose to have children or choose to remain childfree will have high levels of life satisfactions (Feldman, 1981). Having the important choice of having children or not having children taken away from a couple seemed to be the most important factor in marital satisfaction, and it is less about having the children at all. Childfree people face a lack of representation in theories and literature, but they are not alone. Infertile people are often neglected just as much, and neither population's complicated issues are fully explored in current literature (Letherby, 2002). The attitudes sometimes do not end at disapproval. In Russia, for example, over half of those surveyed considered being childfree a plausible threat to Russian society, and almost half held a negative view of being childfree in general (Salyakhieva & Saveleva, 2017).

### **Concerns about Implicit Bias Test**

The implicit bias test has faced some scrutiny on the basis of poor test-retest validity. Hehman et al. suggested that this is because while explicit bias is a trait, implicit bias may be more state-based and less consistent over time (2019). In their article Hehman et al. discussed how rest-retest validity was low from year to year in their regional research into implicit and explicit bias (2019). Their main suggestion for higher reliability was a sufficiently large sample size (Hehman et al., 2019). They also argued that the implicit bias test was never originally created to measure regional or national bias, only personal individual bias. Cunningham, Preacher, and Banaji argue, however, that as long as researchers are aware of potential issues and watch for them, implicit bias tests are valid and reliable (2001). These researchers also argued that the criticism of the implicit bias test have been exaggerated (Cunningham et al., 2001).

## Conclusion

Overall, voluntarily childfree couples have been found to experience a higher level of life satisfaction than their parent peers (Somers, 1993). Voluntarily childfree couples face many challenges due to their decision, including biases and negative views from many sources. Voluntarily childfree couples, and voluntarily childfree individuals, can face many issues such as pressure, sexism, racism, negative perceptions, and a lack of research into best serving their population. Despite the issues that they face, voluntarily childfree couples experienced higher levels of cohesion and marital satisfaction when controlling for age and had significantly higher life satisfaction when controlling for religious affiliation (Somers, 1993). Some researchers and childfree women see being childfree as the ultimate liberation and remaining childfree as the best way to live a life not controlled by others or weighed down by responsibilities of a child (Peterson, 2015).

There are many reasons to be childfree, and not all of the reasons revolve around an avoidance of children. Many young adults in Europe are childfree, but are so by convenience (Miettinen & Szalma, 2014). Miettinen and Szalma found that often younger adults in Europe are putting off the choice to have children for many reasons, such as career or finances. Sometimes the reason is very simple, however. Women in another study cited a lack of maternal instinct and disinterest in children as a few of the major reasons to remain childfree, along with children potentially interfering with their career and free time (Park, 2005). Almost 20% of American women do not have children, double the percentage in the 1970s, yet many people are unsure of how to treat voluntarily childfree couples (Livingston & Cohn, 2010). The United States is very pronatalistic as a society, especially among more industrialized nations, which can be

seen by noting the level of replacement level fertility rates or number of children born per woman (Dye, 2008). There are few predictors of being childfree, and they differ between men and women. More research and normalization of the voluntarily childfree lifestyle is necessary, especially in two areas. Research should be expanded both into why the idea of having children is the norm, and therefore why remaining childfree is not deviant, and the reasons people may choose to remain childfree (Shapiro, 2015).

## CHAPTER III

### METHODOLOGY

Convenience and snowball sampling through internet posts was used to ask people to take the survey in the included link on various websites, such as Facebook, Reddit, Twitter, and Abilene Christian University networks. Participants were recruited using posts on these various social media websites and through fliers posted in the Marriage and Family Institute and Starbucks in Abilene, Texas, asking for participation in a psychological study about attitudes towards adults with and without children. The participants followed a link and took the modified implicit bias test (Childfree IBT) at their leisure (an example of the Childfree IBT is in Appendix B). Harvard researchers developed the Implicit Bias Test to measure implicit racism and has since been adapted for many subjects (Project Implicit, 1998). Participants alternated assigning words, groups, or images as “good” or “bad” as quickly as possible, and the results showed if they have a mild, moderate, or strong bias for or against a specific topic. There were 72 complete responses. Results of the test were analyzed and compared with different traits in respondents such as gender, age, race, and parental status using Statistical Package for the Social Sciences (SPSS) to determine if there was any statistically significant relationship between these traits and attitudes towards voluntarily childfree adults.



Participants were asked to electronically agree to the informed consent, which included the contact information for the researcher and information about risks in this research and the purpose of the research. Once consent was acquired, each participant

answered demographic questions and then took a modified version of the Implicit Bias Test, the Childfree IBT, to determine if they possessed any implicit bias for or against voluntarily childfree adults. PsyToolkit was the software used to host and collect the online data from the demographic questionnaire and Childfree IBT (Stoet, 2017). A computer programmer volunteered their time to assist in creating the Childfree IBT expressly for this research study.

The Childfree IBT was taken on a computer or a smartphone using a mouse or a touchscreen. As each word or image randomly appeared in the center of the screen the participant used either their finger to touch one half of the screen or the other or their mouse to click one side of the screen or the other to assign the word or image to the correct category. An incorrect response moved them on to the next question. An incorrect response was any response that did not assign the word, picture, or group to the correct side of the screen. The first section of the seven in the Implicit Bias Test introduces the participant to the procedure, instructing them to assign “good” words to the left side of the screen and “bad” words to the right side of the screen. Before each section, the participant was shown what words or images they would see in this section and which category they belong to (Figure 1).



- You are about to take an Implicit Association Test in which you will be asked to sort words and images into groups as quickly as you can. You will categorize the following into their respective groups:

Category	Items
Good	Loving, fulfilled, happy, mature, community, hope, strength
Bad	Selfish, sad, immature, angry, lonely, scared, hopeless
Parent of a child	Parent, mother, father, 
Voluntarily Childfree	Childfree, childless, 

- There are seven parts. The instructions may change between sections. Please keep in mind:
- Adam and Anne are a couple in a committed relationship. They made the decision to have two children. They are the “parent of a child” group.
- Barb and Ben are a couple in a committed relationship. They have made the decision together to not have children. They are the “voluntarily childfree” group.
- Tap anywhere to begin.

Figure 1: Example of Childfree IBT Instructions

In the second section the participant was introduced to the words or images used to represent childfree adults and parents, and then assigned them to the left or right side of the screen. In section three and four the participants assign “good” and “parents” to the left side of the screen and “bad” and “not parent” to the right side of the screen. Section 5 switched “bad” and “good” and instructed participants to assign “bad” to the left and “good” to the right. Finally, sections six and seven had participants assign “bad” and “parent” together on the left and “good” and “not parent” to the right.

This research is non-experimental and correlational and was aimed to measure any relationship between different traits and bias towards or against adults who are voluntarily childfree without changing any variables. Once the data was collected it was compiled in SPSS and analyzed to find links between different characteristics and bias. The research variables included the level of bias towards or against voluntarily childfree adults and demographic variables such as gender, age, ethnicity, religion, sexual

orientation, income, education level, employment status, desire for children, marital status, and parental status. These variables were measured using multiple choice questions (ethnicity, gender, sexual orientation, education level, employment status, income, marital status, parental relationship, and desire to have children), sliding scale (age and number of children), and Likert scales (religiosity measures, essential to marry, and essential to have children questions).

The difference in time between the average time taken per question in the two main sections of the test were used to determine each participant's rough Bias Score. The two main sections consist of sections three and four averaged, and sections six and seven averaged. Using this Bias Score, correlation tests were run to look for statistically significant relationships between participants showing bias against voluntarily childfree adults by taking longer to assign positive traits to that population and either demographic traits or attitudinal traits. Z-scores were examined to determine if there were any that could be used to represent an accurate bias score for each participant factoring in the time they took to complete each item in the two main sections and the number of mistakes they made on each section. Adding in the number of mistakes (ranging from zero to 13 in one section) placed too much emphasis on the mistakes and not enough emphasis on the time taken for each section, and it was decided that the bias score was the best measure of bias in this situation.

## CHAPTER IV

### RESULTS

#### **Participants**

Seventy-two ( $N=72$ ) participants completed both the demographic questionnaire and the implicit bias test and were therefore included in the data analysis. The sample was overwhelmingly Caucasian (83.3%), heterosexual (72.2%), and female (72.2%) (Appendix C). Over half of the sample (58.5%) were between the ages of 22 and 31, and the ages of participants ranged from 18 to 73. The participants, on the whole, were highly educated: 75.1% had an associate degree or higher. Of those participants, 58.4% started or finished graduate school. Twenty-five percent of the participants did not have a degree higher than a high school diploma or General Educational Development certificate (GED), although they may have had some college experience. The respondents who completed both parts of the study were generally not parents (70.8%), were employed full time (51.4%), and made less than \$100,000 a year (76.4%). Students made up the second highest population in the employment category, totaling 33.4% between students, part-time employees and students, full-time employees and students, students who were unable to work, students unemployed and looking for work, and students unemployed and not looking for work. Most of those who identified as parents were biological parents (25% of total respondents) and were married (41.3%), with single, never married a close second place at 40.3%.

Interestingly, the highest two areas for the questions for religiosity were 0 and 10, the two extremes of the Likert scale participants had to choose from (26.4% for zero and 15.3% for 10). To create this religiosity score, the three religious questions (all scaled on from zero to 10) were averaged. The three questions were “How much does your religion influence your day to day life,” “Before I make a major decision I consult my faith,” and “How important is religion in your life,” which were averaged to create a “religious salience” score. The mean of these three scores for all participants was 5.27 with a standard deviation of 3.98. Over half (51.4%) of the participants self-identified as protestant, the largest group by a wide margin, with the next largest religious population being agnostic with 12.5%.

The mean bias score of parents was .223 ( $n=21$ ), while the bias score of nonparents was .007 ( $n=51$ ), both with standard deviations of approximately .3. As opposed to all participants, participants who had a negative bias generally possessed higher religious salience scores, with the highest score being 15.3% for all participants and 20.9% for only participants with negative biases towards voluntarily childfree adults.

### **Significant Correlations**

Significant correlation was found between the bias score and parental status ( $R^2=.092$ ,  $p < .01$ ), showing that those who identified as parents took longer to assign positive traits to voluntarily childfree adults than to assign negative traits to the same population, implying bias against voluntarily childfree adults. There was also found significant correlation between age and bias score ( $R^2=.059$ ,  $p < .05$ ), suggesting that the older a participant was, the higher their bias score was.

## CHAPTER V

### CONCLUSIONS

Two areas of significant correlation were found which cause us to reject the null hypothesis: by the chosen measure of bias two populations were found which showed significant bias against voluntarily childfree adults. Participants showed significant bias if they were parents, and age was significant in predicting bias against voluntarily childfree adults. This is in line with the research discussed previously showing a negative bias associated with voluntarily childfree adults. Correlations were relatively weak (-.304 and .242), limiting the application of the results of the study. This could be for a variety of reasons, a likely one being the small sample size. With only 72 participants, correlations are likely to be weak, even when they are statistically significant.

#### **Necessity for Research**

This research is essential because it helps bridge the large gap in research on voluntarily childfree adults and shows significant correlation in a couple of areas. Mental health professionals should use research like this to examine their own biases and make sure they are being as inclusive as possible. For example, it is important to use the correct language, such as switching “childless” for “childfree” in an attempt to not alienate their clients by implying they are missing something from their lives. Also, mental health professionals should examine if they hold any bias against voluntarily childfree adults that would impact their work. Bias towards strangers and bias concerning family and friends could negatively impact work with voluntarily childfree adults. Formalized

training in treating voluntarily childfree adults is probably far away, but it would be beneficial for mental health professionals as the number of voluntarily childfree adults rise. One potential training could be the new life cycle not centered around children being a necessary stage of life.

A growing population of clients choose not to have children, and mental health professionals have to be adequately trained to assist voluntarily childfree clients with issues related to their decision to not have children and issues that are unrelated. Overall this is a population that has not been well researched in the past, has been forgotten in general mental health training, and has been judged societally for their choice to not have children. Any research into the population is valuable insight into the group.

### **Future Research**

As discussed in the introduction, much more research is needed before there is a saturation of research about voluntarily childfree couples. While this project attempts to add more information to this topic, one project cannot make voluntarily childfree adults a well-researched population. Additionally, the participants in this set of data were not representative of ethnic or sexual minorities, so future research similar to this could explore either of those populations. Studies with more participants could be useful, especially as Hehman et al. (2019) argued that a larger sample size is an excellent way to avoid poor test-retest availability of an implicit bias test. It would be interesting to expand this research into the lesbian, gay, bisexual, and transgender (LGBT+) areas, in order to try and determine if same sex couples who are voluntarily childfree face more bias than opposite sex couples. Along these lines, research could explore if lesbian women face more bias than gay men, since in general women experience more bias for

being voluntarily childfree. More research could also be done studying how different minority statuses compound bias, since there is bias based on gender, race, and orientation, and the bias could increase with each trait combined in one person.

### **Limitations**

This study has a few limitations which should be explored. Firstly, 72 participants who are largely white, female, heterosexual, and well-educated hardly show a generalizable sample of data. A more diverse population would be required to properly explore any potential bias linked to gender, race, or sexuality. This could be remedied in the future by being more intentional about recruitment, since many participants were recruited in highly academic circles, resulting in a sample leaning towards highly educated individuals. Secondly, the implicit bias test has faced some criticism questioning its validity and reliability (Cunningham et al., 2001). The main concern from critics is the likelihood that the test should be taken many times to determine true bias, and that only taking it once may not accurately portray bias. Having participants take the test several times would not be feasible for this particular study due to lack of resources and time, and the concerns about the validity and reliability of the Implicit Bias Test were not serious enough to discount it as a useful measurement tool. Cunningham et al. asserted that the Implicit Bias Test is valid and reliable as long as researchers using the measure are aware of potential for problems with reliability and validity (2001). For the scope and limitations of this project, the benefits of the Implicit Bias Test outweighed potential issues.

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## APPENDIX A

### IRB Letter

#### ABILENE CHRISTIAN UNIVERSITY

*Educating Students for Christian Service and Leadership Throughout the World*

Office of Research and Sponsored Programs  
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103  
325-674-2885



October 29, 2019

Elizabeth Powell

Department of Marriage & Family Therapy

Abilene Christian University

Dear Elizabeth,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled "Implicit bias and voluntarily childfree adults",

was approved by expedited review (Category 7 ) on 10/29/2019 (IRB # 19-092 ). Upon completion of this study, please submit the Inactivation Request Form within 30 days of study completion.

If you wish to make any changes to this study, including but not limited to changes in study personnel, number of participants recruited, changes to the consent form or process, and/or changes in overall methodology, please complete the Study Amendment Request Form.

If any problems develop with the study, including any unanticipated events that may change the risk profile of your study or if there were any unapproved changes in your protocol, please inform the Office of Research and Sponsored Programs and the IRB promptly using the Unanticipated Events/Noncompliance Form.

I wish you well with your work.

Sincerely,






*Megan Roth*

Megan Roth, Ph.D.  
Director of Research and Sponsored Programs

## APPENDIX B

### Example of Childfree IBT Instructions

- You are about to take an Implicit Association Test in which you will be asked to sort words and images into groups as quickly as you can. You will categorize the following into their respective groups:

Category	Items
Good	Loving, fulfilled, happy, mature, community, hope, strength
Bad	Selfish, sad, immature, angry, lonely, scared, hopeless
Parent of a child	Parent, mother, father,  
Voluntarily Childfree	Childfree, childless,   

- There are seven parts. The instructions may change between sections. Please keep in mind:
- Adam and Anne are a couple in a committed relationship. They made the decision to have two children. They are the “parent of a child” group.
- Barb and Ben are a couple in a committed relationship. They have made the decision together to not have children. They are the “voluntarily childfree” group.
- Tap anywhere to begin.

APPENDIX C

Frequency Table

Variable	Mean or %	Standard Deviation
Age	33.73	13.17
Gender		
Female	72.2%	-
Male	23.6%	-
Nonbinary	2.8%	-
Prefer not to say	0%	-
Other	1.4%	-
Ethnicity		
Caucasian or White	83.3%	-
African American or Black	6.9%	-
Asian or Pacific Islander	0%	-
Indigenous American or Alaskan Native	0%	-
Hispanic or Latino	6.9%	-
Prefer not to say	1.4%	-
Other	1.4%	-
Sexual Orientation		
Heterosexual	72.2%	-
Homosexual	5.6%	-
Bisexual	13.9%	-
Asexual	4.2%	-
Queer	1.4%	-
Prefer not to say	2.8%	-
Other	0%	-
Highest Level of Orientation		
High school or GED	6.9%	-
Some College	18.1%	-
Finished College (2 year)	2.8%	-
Finished College (4 year)	13.9%	-
Some Graduate School	16.7%	-
Finished Graduate School	41.7%	-



Variable	Mean or %	Standard Deviation
<b>Employment Status</b>		
Employed, Full time	52.1%	-
Employed, Part time	4.2%	-
Unemployed, Looking for work	5.6%	-
Unemployed, Not looking for work	1.4%	-
Student	16.9%	-
Disabled (not able to work)	1.4%	-
Other	1.4%	-
Student and employed part time	8.5%	-
Student and employed full time	4.2%	-
Student and disabled (unable to work)	1.4%	-
Student and unemployed, not looking for work	1.4%	-
Student and unemployed, looking for work	1.4%	-
<b>Annual Income</b>		
\$0-\$24,999	22.2%	-
\$25,000-\$49,999	27.8%	-
\$50,000-\$74,999	15.3%	-
\$75,000-\$99,999	11.1%	-
\$100,000-\$124,999	9.7%	-
\$125,000-\$149,999	6.9%	-
\$150,000-\$199,999	4.2%	-
\$200,000+	2.8%	-
<b>Marital Status</b>		
Married	43.1%	-
Single, never married	40.3%	-
Single, living together	11.1%	-
Divorced	4.2%	-
Widowed	1.4%	-
Separated	0%	-
<b>Number of Children</b>	.63	1.16
<b>Parental Status</b>		
Parent	29.2%	-
Not a Parent	70.8%	-

Variable	Mean or %	Standard Deviation
Parental Relationship		
Biological	25%	-
Adoptive	2.8%	-
Foster	0%	-
Stepparent	1.4%	-
Other	0%	-
Not a parent	68.1%	-
Biological and Adoptive	1.4%	-
Biological, Adoptive, and Stepparent	1.4%	-
Future Children		
Wants Children	30.6%	-
Does not want Children	56.9%	-
Undecided	12.5%	-
Essential to Marry	2.85	1.23
Essential to have Kids	2.46	1.33
Religious Affiliation		
Catholic (including Roman Catholic and Orthodox)	1.4%	-
Protestant (United Church of Canada, Anglican, Orthodox, Baptist, Lutheran)	51.4%	-
Jewish	0%	-
Muslim	0%	-
Hindu	0%	-
Buddhist	0%	-
Pagan	5.6%	-
Agnostic (Not sure if God exists)	12.5%	-
Spiritual but not religious	8.3%	-
Atheist (Do not believe in God)	8.3%	-
None	4.2%	-
Other	8.3%	-
Number of Siblings	2.88	1.45
Birth Order		
Oldest	38.9%	-
Older than half	4.2%	-
Middle	19.4%	-
Younger than half	5.6%	-
Youngest	31.9%	-
Religious Salience Score	5.27	3.98

N=72

APPENDIX D

Correlation Table

Variable	$R^2$
Age	.059*
Parental Status	.092**
Gender	.004
Sexual Orientation	.001
Education Level	.029
Employment Status	.042
Income	.019
Marital Status	.006
Number of Children	.014
Ethnicity	.021
Desire for Future Children	.00005
Essential to Marry	.0003
Essential to Have Children	.017
Religious Affiliation	.000001
Number of Siblings	.019
Birth Order	.006
Religious Salience Score	.012

\* =  $p < .05$     \*\* =  $p < .01$

## APPENDIX E

### Demographic Survey

1. What is your age? (sliding scale)
2. What is your ethnicity?
  - a. Caucasian or White
  - b. African American or Black
  - c. Asian or Pacific Islander
  - d. American Indian or Alaskan Native
  - e. Hispanic or Latino Prefer not to say
  - f. Other
3. What is your gender?
  - a. Male
  - b. Female
  - c. Nonbinary
  - d. Prefer not to say
  - e. Other
4. What is your sexual orientation?
  - a. Heterosexual
  - b. Homosexual
  - c. Bisexual
  - d. Asexual
  - e. Queer
  - f. Prefer not to say
  - g. Other
5. What is the highest level of education you have completed?
  - a. Some high school
  - b. High school or GED
  - c. Some college
  - d. Finished college (2 year degree)
  - e. Finished college (4 year degree)
  - f. Some graduate school
  - g. Finished graduate school
6. Which of the following best describes your current employment status?
  - a. Employed, full time
  - b. Employed, part time
  - c. Unemployed, looking for job
  - d. Unemployed, not looking
  - e. Student
  - f. Retired

- g. Disabled, not able to work
  - h. Other
7. What is your approximate household annual income?
- a. \$0-\$24,999
  - b. \$25,000-\$49,999
  - c. \$50,000-\$74,999
  - d. \$75,000-\$99,999
  - e. \$100,000-\$124,999
  - f. \$125,000-\$149,999
  - g. \$150,000-\$199,999
  - h. \$200,000+
8. What best describes your current relationship status?
- a. Married
  - b. Single, never married
  - c. Single, living together
  - d. Divorced
  - e. Widowed
  - f. Separated
9. Are you a parent?
- a. Yes
  - b. No
10. How many children do you have? (If none skip this question)
- a. (sliding scale) 1 2 3 4 5 6 7 8 9 10
11. Which of these best describes your parental relationship (check all that apply)
- a. Biological
  - b. Adoptive
  - c. Foster
  - d. Stepparent
  - e. Other
  - f. Not a parent
12. Do you plan on having children in the future?
- a. Yes
  - b. No
  - c. Undecided
13. I believe it is essential to my personal happiness and life satisfaction to marry.
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly agree
14. I believe it is essential to my personal happiness to have children.
- a. Strongly disagree
  - b. Disagree
  - c. Neutral
  - d. Agree
  - e. Strongly Agree

15. Which of the following best describes your current religious belief?
  - a. Catholic (including Roman Catholic and Orthodox)
  - b. Protestant (United Church of Canada, Anglican, Orthodox, Baptist, Lutheran)
  - c. Jewish
  - d. Muslim
  - e. Hindu
  - f. Buddhist
  - g. Pagan
  - h. Agnostic (Not sure if God exists)
  - i. Spiritual but not religious
  - j. Atheist (Do not believe in God)
  - k. None
  - l. Other
16. How much does your religion influence your day to day life? (sliding scale)
  - a. (not at all) 0 1 2 3 4 5 6 7 8 9 10 (Every day, with every decision)
17. Before I make a major decision I consult my faith. (sliding scale)
  - a. (not at all like me) 0 1 2 3 4 5 6 7 8 9 10 (very much like me)
18. How important is your religion in your life?
  - a. (not at all important) 0 1 2 3 4 5 6 7 8 9 10 (extremely important)
19. What best describes your political views?
  - a. Republican
  - b. Democrat
  - c. Independent
  - d. Libertarian
  - e. Other
20. How many siblings do you have?
  - a. 0 1 2 3 4 Other
21. Where are you in the birth order?
  - a. Oldest
  - b. Older than half
  - c. Middle
  - d. Younger than half
  - e. Other

Thank you

If you have any questions please email us at [vep18a@acu.edu](mailto:vep18a@acu.edu)

Thank you very much for completing the survey. Please take this opportunity to include any comments here. The Implicit Association Test will begin next.