ORIGINAL ARTICLE



The Role of Racism and Sexism in Attitudes Towards Abortion Among White, Latinx, and Black Individuals

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Abstract

Attitudes towards abortion play a significant historical and contemporary role in U.S. politics. Research has documented the influence of racist and sexist attitudes in Americans' political opinions, yet the role of these attitudes has largely been absent in psychological research about abortion. We hypothesized that racism and sexism, originating from historically-rooted stereotypes about Black women's sexuality and motherhood, would be related to abortion attitudes. In Study 1, we recruited three samples—Black (n=401), Latinx (n=316), and White (n=343) individuals diverse in age, gender, and abortion identity—to complete an online survey assessing abortion attitudes, symbolic racism, modern sexism, and religiosity. Results were consistent with hypotheses: antipathy and resistance to the equality of African Americans (racism) or women (sexism) related to individuals' negative abortion attitudes, above and beyond religiosity, in all three samples. In Study 2, we partially replicated these findings using data from the 2012 American National Election Studies (ANES). Moreover, we extended Study 1's findings by demonstrating that racism and/or sexism predicted opposition to abortion while controlling for political ideology among White (n=2,344) and Black (n=500) individuals but not Latinx individuals (n=318). These studies demonstrated that exclusionary ideologies (i.e., racist and sexist attitudes) relate to individuals' abortion attitudes. These findings may assist researchers and policy makers with interpreting a more comprehensive picture of the racist and sexist attitudes that individuals possibly draw upon when responding to questions about abortion, including voting, answering polls, or supporting political candidates.

 $\textbf{Keywords} \ \ Symbolic \ racism \cdot Modern \ sexism \cdot Abortion \cdot ANES \cdot Black/African \ American \cdot Latinx/Latino/Hispanican \cdot Latinx/Latinx/Latino/Hispanican \cdot Latinx/Lat$

Attitudes – towards abortion play a significant historical and contemporary role in U.S. politics (Carmines & Woods, 2002; Goren & Chapp, 2017). Abortion is both a common

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medical procedure and an important issue for women's rights (Jones & Jerman, 2017). The 2022 reversal of federal protection for abortion access via the Supreme Court Dobbs decision has had wide-reaching implications for people who can be pregnant (Kirstein et al., 2022), making it more important than ever to understand individuals' attitudes towards abortion. Research has documented the presence and influence of racist and sexist attitudes in American's political opinions (e.g., welfare attitudes; Ditonto et al., 2013; Green et al., 2006; Rabinowitz et al., 2009), yet the role of individuals' racist and sexist beliefs has largely been absent in empirical research on abortion attitudes. This has limited researchers' and policy makers' understanding of individuals' attitudes about abortion. As a result, too little has been understood about the specific ideologies that individuals draw upon when thinking about their attitudes about abortion.

In the current research, we examined two potentially relevant factors when considering Americans' attitudes toward abortion: racism and sexism. We examined these ideologies



in the three largest racial/ethnic groups in the U.S.—White, Black, and Latinx adults—to explore whether racist and sexist attitudes play a role in how abortion is imagined in the U.S. and whether these patterns are shared across these three racial/ethnic groups. Additionally, our exploration leveraged data from two studies (original data collection and a replication using the American National Election Studies) to explore if racism and sexism were related to abortion attitudes above and beyond the religious and political factors to which abortion attitudes are most commonly ascribed (e.g., conservative religious affiliation, liberal versus conservative ideology).

Structure of Abortion Attitudes

While abortion is often discussed as a polarizing issue in the U.S., most Americans have "mixed" feelings about it (Jozkowski et al., 2018). This is demonstrated in findings from the General Social Survey (GSS), one of the largest national surveys that has assessed abortion attitudes since 1972 (Smith & Son, 2013). The GSS assesses support for legal abortion under seven distinct conditions. Four conditions in the GSS (i.e., low income, does not want more children, does not want to marry the man, or for any reason) have been labeled "soft" conditions for seeking abortion (sometimes called "easy" or "elective" reasons) and consistently have mixed support from Americans (45–51% support in 2016; Jozkowski et al., 2018). The other three of the conditions in the GSS (i.e., fetal defect, rape, risk to woman's health) have been labeled "hard" conditions (or "difficult" or "traumatic") and are consistently supported by most Americans (over 76% support). Around 7% of the public oppose abortion under all conditions, 31% support abortion under all conditions, and the remaining 62% support abortion under some conditions but not others (Smith & Son, 2013).

When assessing these two dimensions of abortion attitude measurement, Rossi and Sitaraman (1988) argued that the "soft" and "hard" conditions in the GSS has created two sets of situations in the public's mind: those circumstances that infer the woman acted irresponsibly, i.e., the "soft" conditions ("she should... avoid sex or use effective contraceptives," p. 275), and those the woman has little or no control over, i.e., the "hard" conditions ("She was the victim of disease, genes or a rapist," p. 275). As a result, when asked to imagine a woman in the GSS conditions, individuals must imagine a woman acting financially and sexually irresponsible, as well as engaging in behaviors which are historically associated with tropes of Black women's hyperfertility and sexual promiscuity (see McClelland et al., 2020). This begs the question of whether and how racist and sexist attitudes relate to individuals' abortion attitudes.



Legal and reproductive health scholars who highlight the racism apparent in abortion discourses and the disproportionate harm of abortion restrictions on Black and Brown women have suggested that abortion opinions could be informed by racist beliefs (Ross & Solinger, 2017; Solazzo, 2019). Yet the role of individuals' racist beliefs has largely been absent in psychological research about abortion (see McClelland et al., 2020; Raden, 1994 for exceptions). This is surprising considering the abundant and historically rooted stereotypes about Black and Brown women's sexuality and reproduction (Chavez, 2013). For example, the "welfare queen" stereotype popularized the image of a low-income, uneducated Black woman who does not want to work and has multiple children to take advantage of welfare benefits (Nadasen, 2007).

Research suggests these stereotypes do indeed live within individuals' attitudes: Rosenthal and Lobel (2016) found that participants stereotyped Black women as having had more sexual partners, less likely to use birth control, more likely to already have children, and more likely to be low-income compared to White women. Participants also stereotyped Black pregnant women as more likely to be single mothers and in need of public assistance (Rosenthal & Lobel, 2016). In another study, participants chose darker-skinned images of people when instructed to imagine the typical welfare recipient (Brown-Iannuzzi et al., 2017). These findings suggest that some of the conditions under which abortions are imagined to occur in the GSS—for example, the woman is single and does not want to marry the man; the woman is low income—align with stereotypes about Black women; and thus, negative attitudes towards abortion may be influenced by negative attitudes towards Black women.

Indeed, symbolic racism theory argues that some political opinions may be influenced by subtle, "new" anti-Black attitudes that have emerged post-Civil Rights as overt racist views fell into disfavor (Henry & Sears, 2002; Sears & Henry, 2005). Symbolic racism taps the individual belief that systemic discrimination against Black people does not exist, and that Black inequality is the responsibility of Black people's collective failings (e.g., "If Blacks would only try harder, they could be just as well off as Whites;" Henry & Sears, 2002). Because Black people are imagined to not be "pulling themselves up by their own bootstraps," symbolic racism theory predicts opposition to policies that would help Black people. Survey and experimental evidence support these claims. Symbolic racist attitudes predicted White individuals' opposition to policies benefiting Black people (e.g., preferential hiring and promoting of Black employees) above and beyond race-neutral values



like preferring a smaller government and egalitarianism (Ditonto et al., 2013; Rabinowitz et al., 2009). White participants were less likely to support social-economic policies (e.g., tax credits) when they were described as benefiting Black people (and Black pregnant women specifically) than when they were described in race-neutral ways (or as benefiting White pregnant women; Callaghan & Olson, 2017; Johnson et al., 2009). The power of symbolic racism also lies in its ability to predict White people's opposition to policies that both explicitly mention race (e.g., preferentially hiring of Black employees) or imply race (e.g., welfare; Callaghan & Olson, 2017; Rabinowitz et al., 2009).

In summary, because abortion attitudes may similarly prompt implicit stereotypes about Black women, opposition to abortion may be due (in part) to ideologies that oppose policies that could benefit Black people. Only one prior study (Raden, 1994) had direct bearing on our research question, in which they found symbolic racism (measured using one item) related to opposition to "soft" abortion but not "hard" abortion among White Americans. This provided the only empirical evidence to support our research, though this study was limited in its use of an adapted single-item measure of symbolic racism and was conducted on polling data from over 40 years ago. A more comprehensive and contemporary test in a diverse sample is warranted to fully test our theory.

Exclusively or predominately White samples have been the appropriate focus of research on symbolic racism given its theoretical focus, leaving a knowledge gap of how modern anti-Black prejudice might operate in other racial groups as well as in Black individuals themselves. Therefore, an additional aim of the current study was to answer the call for more research on African Americans (Howard & Sommers, 2015) as well as other racial/ethnic minorities, namely Latinx individuals, in order to understand how racism functions to create and maintain negative stereotypes even in one's own identity group, which would increase understanding of subtle racist beliefs in Americans' political attitudes. Research suggests White and Latinx participants may have similar levels of symbolic racism. For example, Black participants endorsed less symbolic racism than Latinx and White participants, while Latinx and White participants did not differ significantly (Henry & Sears, 2002) or their difference was small (d = .22; Ditonto et al., 2013). Latinx and White individuals were less likely to attribute Black inequities to discrimination (41% of Latinx, 30% of Whites) than were Black participants (61%; Hunt, 2007). Symbolic racism also predicted Latinx negative evaluations of Barack Obama in 2008 and policies benefiting Black people in a similar fashion as it did for Whites (Ditonto et al., 2013).

In contrast, how symbolic racism operates and exerts an effect on political attitudes in Black individuals is less clear. Symbolic racism and other anti-Black racisms exhibited

less clear patterns of correlations with each other and with political opinions (Ditonto et al., 2013). Other studies suggest that symbolic racism as a construct is more accurately understood in Black participants as structural versus individual attributions for Black Americans' social status (Kam & Burge, 2017). That said, it is clear that some Black people do endorse aspects of symbolic racism and opposition to policies benefiting Black people (Ditonto et al., 2013; Hunt, 2007; Kam & Burge, 2017), as might be expected in a predominately White society characterized by pervasive White Supremacist ideologies (Howard & Sommers, 2015). Thus, there is a need to explore how modern anti-Black prejudice operates in Black participants' abortion attitudes as well as in Latinx populations, which have been and are projected to be the largest growing racial/ethnic group in the U.S. (Chavez, 2013).

Modern Sexism and Abortion Attitudes

Unlike racism, there has been more attention to the role that sexism and attitudes towards women play in attitudes about abortion. Indeed, the abortion debate touches on opinions about the assumed essential nature of motherhood to women, the permissibility of women's sexual behavior, and the importance of roles for women outside of the domestic sphere (Huang et al., 2016; Jelen & Wilcox, 2003). Research suggests that those who hold benevolent sexist views about women—beliefs that women are "pure" and in need of male protection and intimacy—oppose abortion because it violates their idealization of the role of motherhood for women (Huang et al., 2016).

Similarly, those who hold hostile sexist views—that women exaggerate the existence of sexism and that male–female relations are a power struggle—also oppose abortion because they oppose women's expanding societal roles (Huang et al., 2014). Multiple studies have demonstrated that stronger endorsement of sexist views predict stronger opposition to "soft" and "hard" abortion (Hodson & MacInnis, 2017; Huang et al., 2014, 2016; Osborne & Davies, 2012).

This prior research on sexism focused on sexist views about women's characteristics and societal roles, but measures of benevolent and hostile sexism (also known as ambivalent sexism) focus on how people think women and men do (and should) behave. In contrast, measures of "modern sexism" focus more on the public sphere, including women's equality and status in society. Modern sexism grew out of theories of symbolic racism and other "new" racisms: "Like modern racism, modern sexism is characterized by the denial of continued discrimination, antagonism toward women's demands, and lack of support for policies designed to help women" (Swim et al., 1995, p. 199). While



theoretically similar to and empirically correlated with other forms of sexism (Hayes & Swim, 2013), modern sexism uniquely captures attitudes about continued discrimination and women's equality. Modern sexism, like symbolic racism, captures negative attitudes towards a targeted group which are, in part, based on attributions of that group's personal responsibility for social inequality. Thus, it is important to understand how people's resistance to women's social equality, as well as resistance to policies designed to help women, might relate to attitudes about abortion as an issue critical to women's social equality.

Like symbolic racism, how modern sexism operates across social identity groups merits investigation. Modern sexism appears to operate similarly in Latinx and White samples. For example, Latinx and White adults did not differ in their endorsement of modern sexism in two studies (Cunningham & Melton, 2012; Davis et al., under review). Moreover, modern sexism demonstrated statistically significant convergent validity with other forms of sexism in Latinx and White participants (Hayes & Swim, 2013). The results are more mixed for Black participants. Black participants endorsed significantly less modern sexism than White participants (Hayes & Swim, 2013; Davis et al., under review) or the difference trended in this direction (Cunningham & Melton, 2012). Moreover, modern sexism had inconsistent or nonsignificant convergent validity in Black participants (Hayes & Swim, 2013). Some have speculated that experiences with racial discrimination may make Black individuals more aware of sexist discrimination (Hayes & Swim, 2013). Whether this translates into differential relationship with abortion attitudes is key to investigate.

Current Studies

In Study 1, we recruited a non-probability sample of Black, Latinx, and White participants to examine the role of racism and sexism in three racial/ethnic identity groups, diverse in age, gender, and abortion identity. Our aim was to conduct an initial, cross-sectional test of racism and sexism's co-occurring relations with abortion attitudes, organized by racial/ethnic identities. In Study 2, we used the 2012 American National Election Studies (ANES) data and aimed: (1) to replicate the results from Study 1; and (2) to extend the findings by controlling for political ideology in addition to religiosity. We selected 2012 because it was the only year in which ANES assessed "soft" and "hard" abortion conditions and modern sexism using multi-item measures similar to Study 1.

Based on the evidence reviewed above, we proffered the following hypotheses about each racial/ethnic group in Study 1. First, we hypothesized that envisioning the "soft" social and economic reasons for abortions like "having too many kids"

aligns with stereotypes about Black women for White respondents, and thus, White participants higher in symbolic racism will more strongly oppose "soft" abortion (Hypothesis 1a). Because symbolic racism and modern sexism appeared to be similarly endorsed and exhibited similar patterns of findings in White and Latinx groups in prior studies, we hypothesized that the relations between symbolic racism and more opposition to "soft" abortion would hold true for Latinx participants as in White participants (Hypothesis 2a). In contrast, theory and prior research were unclear as to whether envisioning "hard" conditions such as "defect in the baby" aligned with stereotypes about Black women, so we also explored whether symbolic racism predicted opposition to "hard" abortion in White respondents (Exploratory Question 1b) and in Latinx participants (Exploratory Question 2b) but did not offer specific hypotheses. Drawing on modern sexism theory and prior research on sexism and abortion attitudes, we hypothesized that higher modern sexism would predict opposition to both "soft" and "hard" abortion for White (Hypothesis 1c) and Latinx (Hypothesis 2c) participants. Finally, because symbolic racism and modern sexism have been less endorsed in Black samples compared to White and Latinx samples, and both constructs exhibited less clear patterns of findings in their relations to relevant constructs, we offered exploratory questions rather than specific hypotheses: Will symbolic racism and modern sexism predict opposition to "soft" and "hard" abortion in Black participants (Exploratory Questions 3a, 3b, 3c)?

Due to the strong effect that religion has played in prior research, both studies controlled for three well-established elements of religiosity that each independently predict abortion opposition: affiliation, commitment, and beliefs. Those affiliated with politically engaged, socially conservative denominations like Christian Evangelicals and Roman Catholics (Adamczyk et al., 2020; Jelen & Wilcox, 2003; Williams, 2011), those with more frequent religious attendance or who feel more religious commitment (Adamczyk & Valdimarsdóttir, 2018; Jelen & Wilcox, 2003), and those with stronger beliefs in Biblical literalism (the interpretative approach that the Bible is the literal word of God that features heavily in fundamental or Evangelical Christianity; Swank & Fahs, 2016; Unnever et al., 2010) tend to be more opposed to abortion than mainline Protestant people, Jewish people, non-religious people, and those who do not believe in Biblical literalism. Controlling for religiosity is also important in the context of examining racial/ethnic differences in abortion opposition. Specifically, Black and Latinx respondents have been slightly more opposed to abortion than White respondents, but results are mixed (Jelen & Wilcox, 2003), and sometimes it is religious differences in attendance and affiliation that account for racial/ethnic differences in abortion attitudes (Adamczyk & Valdimarsdóttir, 2018), with African Americans and Latinx individuals having more religious attendance than White individuals.



In Study 2, we hypothesized that any findings demonstrated in Study 1 would replicate in the Study 2 ANES sample while following the same analysis protocol as Study 1. In addition, given the important role of political alignment in abortion attitudes, in Study 2, we hypothesized that symbolic racism and modern sexism would predict opposition to abortion while controlling for political ideology (i.e., liberal versus conservative) in addition to religiosity.

Finally, we did not examine gender differences in our analyses for several reasons. First, there is not a theoretical rationale in the articulation of symbolic racism that would suggest symbolic racism operates differently in women and men. Second, though women endorse less modern sexism than men (Hayes & Swim, 2013; Swim et al., 1995), women do endorse modern sexist beliefs and these beliefs predict their political opinions (e.g., preferring a man over a woman Senate candidate; Swim et al., 1995). Third, while some research suggests that women tend to hold stronger anti-abortion beliefs than men, this relationship disappears (Adamczyk & Valdimarsdóttir, 2018) or reverses entirely when controlling for a comprehensive set of religious variables, including religious commitment and religious attendance (Barkan, 2014; Lizotte, 2015). This mitigating effect of religion on the gender gap in abortion attitudes has been found in both Black and White individuals (Lizotte & Carey, 2021). This means that women's stronger anti-abortion stance can be attributed to their stronger religiosity than men, which makes it more important to control for religion in research involving different racial/ethnic groups. Thus, gender differences are not as effective in predicting support for abortion legality compared to behaviors (e.g., religiosity) and attitudes (e.g., sexism), nor does one's gender inoculate oneself against the internalization of sexist attitudes.

Study 1 Method

Hypotheses and analysis plans were preregistered after data collection but prior to data analysis (see https://osf.io/4cwrn). Survey materials as seen by participants, data in CSV and SPSS format, SPSS syntax, and codebook are available at https://osf.io/6ukrq/. Exact wordings for all included measures and details about adaptation and validation are available in the online supplement. This study was approved by the Institutional Review Board.

Study Design and Recruitment

Data were collected over two weeks in August 2020 by the Survey Research Institute (SRI) of Cornell University. Participants were recruited by SRI and its partners via emails and account messages to individuals associated with several U.S.-based research panels. To avoid participant self-selection into the study based on abortion attitudes, the study was advertised as "The Opinion Study" in which they would "be asked to share opinions." To ensure a diversity of abortion views and to adequately power analyses in each group, a non-probability, purposive sampling strategy aimed to recruit a sample that was equal-thirds Black/African American, Hispanic/Latinx, and White; equal-thirds pro-life, pro-choice, and undecided; equally women and men; and equal-thirds ages 18-35, 36-50, and 50–85. An a priori power analysis for a research question unrelated to the current studies resulted in requiring 360 participants in each racial/ethnic group (1,080 total), and therefore we aimed to recruit 1,242 participants anticipating that 15% would be removed during data cleaning (Buchanan & Scofield, 2018).

Participants completed a four-question eligibility screener in English about the four characteristics listed above and were routed into the study based on the needs of the sampling frame or were thanked and discontinued. Participants were compensated \$10 for taking the survey, which took on average 32 minutes to complete.

Participants

A total of 1,289 participants completed the survey. Prior to analysis, responses were screened for low quality. Specifically, cases were removed that had more than 5% of data missing (n=21) or if they had a combination of low-quality indicators, such as failed instructed response items, nonsensical responses to open-ended questions, or long strings of identical ratings of items. This resulted in a sample of 1,075 participants for analysis (n=214 removed, or 17%). Removed cases were more likely to be younger, Black/African American, abortion-ambivalent, and financially struggling than those who were retained. See the online supplement for more details on the screening procedure.

Participants indicated their race/ethnicity via a "check all that apply" item. Those who selected "Black or African American" only or "Black or African American" and another race/ethnicity were included in the Black sample. Those who only selected "Hispanic, Latinx, or Spanish" or "Hispanic, Latinx, or Spanish" and another race/ethnicity (except "Black or African American") were coded as the Latinx sample. Those who only selected "White" were coded as the White, non-Hispanic sample. Thus, those who are targets of symbolic racism (Black/African American) were separated from samples who were not targets of symbolic racism. Participants who did not select Black, Latinx, or White (e.g., selected "Asian" only) were excluded (n=15) to focus on the three groups of interest.



The final sample (n=1,060) was composed of Black (n=401), Latinx (n=316), and White (n=343) individuals. Full sample demographics are displayed in Table S1 in the online supplement. Across the three samples, participants identified as women (51%-52%), men (47%-48%), and non-binary (2%). In brief, most participants identified as heterosexual, married or in a relationship, and as employed full-time. The samples included participants with a range of abortion identities: "pro-life" (34%-41%), "pro-choice" (41%-48%), and "neither," "both," or "something else" (16%-25%). In terms of religiosity, participants reported a variety of religious affiliations, including Conservative Christian (34%-61%), other affiliations such as Mainline Protestant (18%-51%), and those who were not religious (12%-28%).

Measures

Symbolic Racism

Symbolic racism was assessed using an adapted form of the 8-item Symbolic Racism 2000 Scale (e.g., "Blacks" was revised to "Black people;" Henry & Sears, 2002). An example item was, "Over the past few years, Black people have gotten less than they deserve," rated on a 4-point Likert-type scale ($I = Strongly \ agree$ to $4 = Strongly \ disagree$) with five reverse-scored items. Items were averaged per Sears and Henry (2005), such that higher scores indicated more symbolic racism. One measurement invariance study using an online adult sample demonstrated that scores were internally consistent in Black ($\alpha = .84$), Latinx ($\alpha = .88$), and White ($\alpha = .91$) individuals, and that the measure was invariant across race/ethnicity (Davis et al., under review).

Modern Sexism

Modern sexism was assessed using an adapted form of the 8-item Modern Sexism Scale (e.g., "husbands and wives" was revised to "men and women"; Swim et al., 1995). An example item was, "Discrimination against women is no longer a problem in the United States." The rating scale was revised from a 5-point Likert-type to a 4-point scale ($l = Strongly \ agree$ to $4 = Strongly \ disagree$) to be consistent with the Symbolic Racism Scale and to force a choice by eliminating the neutral midpoint. Others using the 4-point scale found that scores demonstrated convergent validity and internal consistency in White college students ($\alpha = .73$; Baber & Tucker, 2006). All items were averaged, after reversing five items, such that higher scores indicated more modern sexism. Scores have demonstrated internal consistency in Black $(\alpha = .84)$, Latinx $(\alpha = .89)$, and White $(\alpha = .91)$ individuals and in women ($\alpha = .89$) and men ($\alpha = .88$; Davis et al.,

under review). Measurement invariance testing demonstrated that the scale was equivalent in women compared to men (Davis et al., under review). Testing also showed the scale was equivalent in Black, Latinx, and White individuals except for one item (which asks about "government and media concerns with the treatment of women"), so we reworded that item in the current study (see the online supplement).

Religiosity

We assessed religiosity using four items: religious affiliation (one item), religious salience (one item), and religious beliefs (two items: Biblical literalism and governmental purity). Participants' selected affiliations were grouped into 2=Conversative Christian affiliation (e.g., Catholic, Evangelical Protestant), 1 = Other religious affiliation (e.g., Mainline Protestant), or 0=Religious unaffiliated (e.g., Agnostic). Although these religions feature much between- and within-group heterogeneity in dogma and practice (Steensland et al., 2000), these three groups were formed based on prior research on abortion (Adamczyk et al., 2020; Jelen & Wilcox, 2003; Williams, 2011) and religion classification schemes (Steensland et al., 2000), in which we balanced grouping religions by similar abortion views versus achieving reasonable sample sizes in each group. Participants' write-in answers were coded by the first author and a religious studies scholar (e.g., "Pentecostal Holiness" was coded as "Evangelical Protestant").

Religious salience was assessed with one item adapted from the 2012 GSS that asked "how strongly you feel about your religious/spiritual identity," rated $0 = Not \ religious \ or \ spiritual$ to $5 = Very \ strongly \ religious \ or \ spiritual$, with higher scores reflecting higher religiosity. Higher scores on this item were correlated with more opposition to abortion (Barkan, 2014).

Biblical literalism was assessed with one adapted item that has been in use by the GSS since 1984: "Which of these statements comes closest to describing your feelings about the Bible?" with response options: 3 = It is the word of God, to be taken literally; 2 = It is the word of God, but not everything should be taken literally; 1 = It is a book of history, not the word of God / It is a book of stories, written by people. Thus, higher scores reflected more Biblical literalism. The response option "I don't know" (n = 47 endorsed this) was coded as 1 to retain those participants rather than drop them from the final model given that we handled missingness with pairwise deletion (more detail below in Data Analysis). This was a deviation from the preregistered analysis plan in which we specified "I don't know" would be coded as missing. Stronger Biblical literalism using this item, or a similarly worded item from the ANES, has correlated with stronger abortion opposition (Swank & Fahs, 2016; Unnever et al., 2010).



Religious purity/sanctity in the government was assessed using one item from the original Moral Foundation Questionnaire (Graham et al., 2009). This item read, "The government should try to help people live virtuously and avoid sin," rated 1 = Strongly disagree to 5 = Strongly agree, with higher scores indicating more policy-specific purity concerns. Among the moral reasons from moral foundations theory (Graham et al., 2009), purity was the strongest predictor of abortion opposition, and scores on the full scale remained related to abortion opposition while controlling for all other moral concerns and political ideology (Koleva et al., 2012).

Abortion Attitudes

Abortion attitudes were assessed using seven items from the GSS (Smith & Son, 2013). The item stem read, "Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion if..." which was followed by seven circumstances, such as "if she is married and does not want any more children?" Items were rated on a 3-point scale: 1 = Yes, 2 = I don't know, or 3 = No, with higher scores indicating more opposition to legal abortion. The three items about "hard" abortion conditions (defect, rape, woman's health) were averaged to create the "hard" abortion score and four items about "soft" abortion conditions (low income, does not want more children, does not want to marry the man, any reason) were averaged to create the "soft" abortion score. "Hard" and "soft" scale scores have shown internal consistency (α 's=.83 and .96, respectively; Osborne & Davies, 2012).

Data Analysis

To test our primary hypothesis, we conducted multiple linear regression analyses in SPSS version 27 in which opposition to "soft" or "hard" abortion were each regressed on symbolic racism, modern sexism, and the four religiosity variables in each of the three samples. This was a revision of the preregistered data analysis plan which specified testing the hypotheses all simultaneously in one structural equation model in each racial/ethnic group; we made this revision due to poor model fit (see the online supplement for more details). A regression framework was an appropriate alternative because no causal or indirect pathways were specified in the preregistered SEM, and much research on symbolic racism and modern sexism uses regression frameworks for hypothesis testing (Rabinowitz et al., 2009; Sears & Henry, 2005; Swim et al., 1995).

Assumptions for regression analyses were tested. Some models predicting "soft" and "hard" abortion evidenced non-normal residual plots (i.e., P-P plots), though multicollinearity was not demonstrated (i.e., variable inflation tolerance statistics were all well below a value of 5). We attributed the non-normal residuals to non-normal distributions observed for both

outcome variables—the two abortion sub-scales—whereas all linear predictors (i.e., symbolic racism, modern sexism, religious salience, purity in government) demonstrated normal distributions (i.e., skewness < 2). "Soft" abortion scores resembled a bimodal distribution, with many people endorsing complete support (mean of 1.00) or complete opposition (mean of 3.00). "Hard" abortion scores were somewhat positively skewed (i.e., skewness ranged 1.286–1.615 across samples) with most participants endorsing complete support (mean of 1.00) and a decreasing number endorsing opposition. These results were not unexpected because they mirror national trends in abortion opposition reviewed above (Smith & Son, 2013). Therefore, in addition to linear regression, we conducted a sensitivity analysis in which abortion was analyzed as an oppose vs. support median-split binary outcome (logistic multiple regression) to ensure our results were not spurious. Modeling abortion opposition as a binary outcome in logistic multiple regression did not affect the main findings. Therefore, we reported coefficients from linear regression models for ease of comparing standardized coefficient effect sizes with prior literature and for easier comprehension rather than odd-ratios from logistic regression. Missingness was less than 2% across all variables and was handled with pairwise deletion.

A post hoc power analysis was conducted in G*Power 3.1.9.7 (Faul et al., 2009) to determine the achieved sensitivity of a single predictor in a multiple regression model, i.e., significant change in R^2 , for the final sample sizes in the current study. This analysis indicated that, given a one-tailed α =.05 and 6 predictors, the final sample sizes of the Black (N=401), Latinx (N=316), and White (N=343) samples would have 80% power to detect a small effect size of a single predictor ($f^2 = .020, .025, \text{ and } .023 \text{ for the Black, White, and}$ Latinx samples, respectively), where $f^2 = .020, .15, \text{ and } .35 \text{ are}$ Cohen's guidelines for small, medium, and large effect sizes, respectively (Faul, et al., 2009, p. 1155). Prior research has found medium-to-large relations between symbolic racism and social policies using multiple regressions (betas ranged .25-.53; Rabinowitz et al., 2009; Sears & Henry, 2005) and small-to-medium sized relations between sexism and abortion (rs ranged .18–.44; Huang et al., 2016; Osborne & Davies, 2012). Thus, the samples met the power needs to detect the effect sizes in prior literature and those we expected to find.

Study 1 Results

Descriptive Statistics and Bivariate Relations

Table 1 displays means, standard deviations, Cronbach alpha reliabilities, and correlations among all variables (with 95% confidence intervals around the correlations) in White and Latinx samples. Table 2 displays findings for the Black sample. The three groups did not differ



on their levels of opposition to abortion under "soft" or "hard" conditions (both one-way ANOVA p's > .05). However, the groups differed on their endorsement of symbolic racism, F(2,1056) = 85.665, p < .001, and modern sexism, F(2, 1057) = 17.314, p < .001. Post-hoc Tukey tests showed that the White sample endorsed more symbolic racism than the Latinx sample (p = .002, Cohen's d = 0.26, 95% Confidence Interval [CI] = [0.10, 0.41]) and the Black sample (p < .001, d = 0.94, 95% CI: [0.79,1.09]), and the Latinx sample endorsed more symbolic racism than the Black sample (p < .001, d = 0.69, 95% CI: [0.54, 0.84]). Moreover, the White sample endorsed more modern sexism than the Black sample (p < .001, d = 0.43, 95% CI: [0.29, 0.57]), the Latinx sample endorsed more modern sexism than the Black sample (p = .001, d = 0.28,95% CI: [0.13, 0.44]), and the White and Latinx sample did not differ (p = .146).

At the bivariate level, higher symbolic racism and modern sexism were related to stronger opposition to "soft" and "hard" abortion across all three samples with small to medium effect sizes (*rs* ranged .20–.34). In all samples, all or most religious variables were associated with each other and with opposition to abortion in the expected directions.

Primary Hypotheses Testing

Table 3 displays results of testing our primary hypotheses using multiple regression. More symbolic racism predicted

higher opposition to "soft" abortion (low income, does not want more children, does not want to marry the man, any reason) in the White sample while controlling for religious predictors of abortion attitudes (β =.16). Symbolic racism predicted opposition to "soft" (β =.22) and "hard" abortion (β =.26; defect, rape, woman's health) in the Black sample. Symbolic racism did not predict opposition to "soft" or "hard" abortion in the Latinx sample; only modern sexism was a significant predictor of abortion opposition in this sample (β 's=.23). Finally, neither symbolic racism nor modern sexism predicted opposition to "hard" abortion in the White sample.

Given that symbolic racism and modern sexism were so highly correlated in all three samples (rs ranged .60–67, see Tables 1 and 2), we also conducted exploratory analyses that were not preregistered to explore whether the strong relationship between these two variables in the multiple regressions were obscuring their individual relations with abortion opposition. Predictors that are highly correlated can appear significant by chance or alternatively rendered zero when entered into a multiple regression even if multicollinearity is not observed (Jaccard et al., 2006, p. 464), so this follow-up was necessary to confirm our findings. Results of these exploratory analyses are also displayed in Table 3. In contrast to the combined models, models testing the independent effects of symbolic racism and modern sexism while controlling for religiosity showed that both attitudes were related to abortion. That is, in the Black, Latinx, and White samples, higher symbolic racism and higher

Table 1 Study I Means, Standard Deviations, Reliabilities, and Correlations Among All Variables (with 95% Confidence Intervals Around the Correlations) in the White and Latinx Samples

Variables (range)	White mean α (SD)	1	2	3	4	5	6	7	8	9	Latinx mean (SD)	α
1. Oppose "Soft"	1.94 (0.87) .95		.59***	.31***	.34***	.20***	17**	.26***	.36***	.25***	1.89 (0.81)	.91
Abortion (1-3)			.51, .66	.21, .41	.24, .44	.09, .30	28,06	.16, .36	.26, .45	.14, .35		
2. Oppose "Hard"	1.45 (0.64) .82	.64***		.25***	.31***	.12*	08	.19***	.22***	.19***	1.35 (0.55)	.75
Abortion (1–3)		.58, .70		.14, .35	.20, .40	.01, .23	19, .03	.08, .29	.11, .32	.08, .29		
3. Symbolic Racism	n 2.43 (0.71) .87	.33***	.25***		.60***	.17**	12*	.14*	.27***	.28***	2.26 (0.67)	.85
(1-4)		.23, .42	.15, .34		.52, .66	.06, .28	23,01	.03, .25	.16, .37	.17, .38		
4. Modern Sexism	2.27 (0.66) .84	.30***	.26***	.67***		.05	04	.08	.20***	.34***	2.18 (0.66)	.84
(1-4)		.20, .39	.16, .36	.61, .73		06, .16	15, .07	03, .19	.10, .31	.24, .44		
5. Conservative	0.38 (0.49) n/a	.27***	.28***	.16**	.16**		65***	.35***	.45***	.20***	0.61 (0.49)	n/a
Christian		.17, .37	.18, .37	.06, .27	.05, .26		71,58	.25, .44	.36, .53	.10, .31		
Religion (0-1)												
6. Religiously	0.29 (0.45) n/a	29***	22***	21***	20***	50***		59***	48***	21***	0.21 (0.41)	n/a
Unaffiliated (0-1))	38,19	32,12	31,11	31,10	57,41		65,51	56,39	31,10		
7. Religious	2.92 (1.79) n/a	.39***	.37***	.25***	.25***	.40***	72***		.50***	.29***	3.06 (1.64)	n/a
Salience (0-5)		.30, .48	.28, .46	.15, .35	.15, .35	.31, .49	76,66		.41, .58	.18, .38		
8. Biblical	1.93 (0.80) n/a	.39***	.37***	.28***	.26***	.41***	55***	.65***		.37***	1.96 (0.76)	n/a
Literalism (1-3)		.29, .47	.27, .46	.18, .37	.16, .36	.32, .50	62,47	.58, .70		.28, .47		
9. Purity in Govt.	2.76 (1.38) n/a	.31***	.29***	.28***	.33***	.28***	25***	.39***	.45***		2.62 (1.36)	n/a
(1–5)		.21, .40	.19, .38	.18, .37	.23, .42	.18, .37	34,14	.29, .47	.36, .53			

White sample beneath the diagonal, Latinx sample above the diagonal. Religious affiliation was dummy-coded with "Other religious affiliation" as the referent group

n/a Not applicable, α Cronbach alpha

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



 Table 2
 Study 1 Means, Standard deviations, Reliabilities, and Correlations Among All Variables (with 95% Confidence Intervals Around the Correlations) in the Black Sample

Variables (range)	Black mean (SD) Black α	Black α	1	2	3	4	5	9	7	&
1. Oppose "Soft" Abortion (1–3)	1.98 (0.80)	06:								
2. Oppose "Hard" Abortion (1–3)	1.44 (0.57)	.74	.60*** (.54, .66)							
3. Symbolic Racism (1–4)	1.82 (0.59)	62.	.26*** (.16, .34)	.26*** (.16, .34) .34*** (.25, .43)						
4. Modern Sexism (1–4)	2.00 (0.60)	92.	.20*** (.10, .29)	.20*** (.10, .29) .27*** (.17, .36) .62*** (.56, .68)	.62*** (.56, .68)					
5. Conservative Christian Religion (0-1)	0.35 (0.48)	n/a	.03 (07, .13)	.06 (04, .16)	.03 (07, .13) $.06 (04, .16)$ $.13** (.04, .23)$ $.13* (.03, .22)$.13* (.03, 22)				
6. Religiously Unaffiliated (0-1)	0.12 (0.33)	n/a	11* (20,01)	.01 (09, .11)	.07 (02, .17)	.00 (10, .10)	01) .01 (09,.11) .07 (02,.17) .00 (10,.10)28*** (37,18)			
6. Religious Salience (0–5)	3.93 (1.37)	n/a	.13** (.03, .23)	.05 (05, .15)	04 (14, .06)03 (13, .06)	03 (13, .06)	.20*** (.10, .29)	.20*** (.10, .29)63*** (68,56)		
7. Biblical Literalism (1–3)	2.33 (0.73)	n/a	.21*** (.12, .30)12* (.03, .22)	.12* (.03, .22)	.12* (.02, .21)	.13** (.03, .23)	.19*** (.09, .28)	.12* (.02, .21) .13** (.03, .23) .19*** (.09, .28) 31*** (40,22) 31*** (.35, .51)	31*** (.35, .51)	
8. Purity in Govt. (1–5)	3.00 (1.39)	n/a	.14** (.04, .24)	.18*** (.08, .27)	$ \text{n/a} \qquad .14^{**} \ (.04,.24) .18^{***} \ (.08,.27) .18^{***} \ (.08,.27) .27^{***} \ (.18,.36) \qquad .16^{**} \ (.06,.26) $.27*** (.18, .36)	.16** (.06, .26)	09 (19, .01)	09 (.06, .25)	09 (.06, .25) .22*** (.12, .31)
Religious affiliation was dummy-coded with "Other religious affiliation" as the referent groun	dummy-coded with	"Other re	ligions affiliation	" as the referent	group					

Religious affiliation was dummy-coded with "Other religious affiliation" as the referent group

n/a Not applicable, α Cronbach alpha

 *p < .05; $^{**}p$ < .01; $^{***}p$ < .001



 Table 3
 Study 1 Regressions Predicting Opposition to Abortion

Predictor			Dependent variable					
	Primary h	ypotheses		Explorator	y follow-up			
	"Soft" abortion	"Hard" abortion	"Soft" abortion	"Hard" abortion	"Soft" abortion	"Hard" abortion		
White Sample $(n=337)$								
Conservative Christian Religion	.09 (02, .20)	.14* (.03, .26)	.09 (02, .20)	.14* (.03, .26)	.09 (02, .20)	.14* (.03, .26)		
Religiously Unaffiliated	.06 (08, .20)	.19* (.04, .34)	.06 (08, .20)	.19* (.04, .33)	.06 (09, .20)	.19* (.04, .33)		
Religious Salience	.21** (.05, .36)	.28*** (.13, .44)	.21** (.06, .36)	.28*** (.13, .44)	.21** (.06, .36)	.28*** (.13, .44)		
Biblical Literalism	.16* (.03, .29)	.16* (.03, .30)	.16* (.03, .29)	.16* (.03, .30)	.18** (.04, .31)	.17* (.03, .30)		
Purity in Government	.09 (02, .20)	.07 (04, .19)	.10 (01, .21)	.09 (02, .20)	.09 (02, .20)	.07 (04, .19)		
Symbolic Racism	.16* (.03, .28)	.06 (08, .19)	.20*** (.10, .30)	.12* (.02, .22)	_	_		
Modern Sexism	.08 (05, .20)	.11 (02, .24)	_	_	.18*** (.07, .28)	.14** (.04, .25)		
Adjusted R^2 for Model	.24	.21	.24	.21	.23	.21		
Latinx Sample $(n=312)$								
Conservative Christian Religion	.08 (06, .21)	.08 (07, .22)	.04 (10, .18)	.06 (09, .20)	.09 (05, .22)	.08 (06, .22)		
Religiously Unaffiliated	.10 (05, .25)	.13 (03, .28)	.10 (06, .27)	.13 (03, .29)	.10 (05, .26)	.13 (03, .29)		
Religious Salience	.16* (.03, .29)	.16* (.02, .30)	.16* (.02, .30)	.15* (.01, .29)	.15* (.02, .28)	.16* (.02, .30)		
Biblical Literalism	.22*** (.10, .35)	.08 (05, .22)	.25*** (.12, .39)	.09 (04, .23)	.23*** (.10, .36)	.09 (04, .22)		
Purity in Government	.03 (08, .14)	.03 (09, .15)	.05 (07, .16)	.08 (04, .19)	.03 (08, .15)	.03 (09, .15)		
Symbolic Racism	.07 (05, .20)	.06 (07, .19)	.21*** (.10, .32)	.19** (.07, .30)	_	_		
Modern Sexism	.23*** (.10, .36)	.23*** (.09, .36)	_	-	.27*** (.17, .38)	.26*** (.15, .37)		
Adjusted R^2 for Model	.21	.12	.19	.09	.21	.12		
Black Sample $(n=389)$								
Conservative Christian Religion	07 (17, .04)	01 (11, .09)	06 (17, .04)	01 (11, .09)	05 (15, .05)	.01 (09, .11)		
Religiously Unaffiliated	07 (20, .06)	.06 (07, .18)	07 (20, .05)	.05 (07, .17)	04 (17, .08)	.09 (04, .21)		
Religious Salience	.02 (11, .15)	.05 (07, .18)	.02 (11, .15)	.05 (08, .17)	.03 (10, .16)	.06 (07, .19)		
Biblical Literalism	.16** (.05, .27)	.07 (04, .17)	.16** (.06, .27)	.07 (03, .18)	.18** (.07, .29)	.08 (03, .19)		
Purity in Government	.06 (04, .17)	.12* (.02, .22)	.07 (03, .17)	.13** (.03, .23)	.06 (04, .17)	.12* (.02, .22)		
Symbolic Racism	.22*** (.10, .34)	.26*** (.14, .38)	.24*** (.14, .34)	.30*** (.20, .39)	_	_		
Modern Sexism	.03 (10, .15)	.07 (05, .19)	_	_	.16** (.06, .26)	.23*** (.13, .33)		
Adjusted R^2 for Model	.10	.13	.10	.13	.07	.09		

For simplified presentation, only standardized β coefficients (and their 95% confidence intervals) are displayed and leading zeros (0.) are omitted. No. of participants (n) for the models testing the primary hypotheses are displayed and are reduced from the full sample due to missingness on some predictors. Religious affiliation was dummy-coded with "Other religious affiliation" as the referent group

modern sexism both predicted stronger opposition to "soft" abortion (consistent with our hypotheses; White β =.20, Latinx β =.21, Black β =.24 for symbolic racism, White β =.18, Latinx β =.27, Black β =.16 for modern sexism). In addition, higher symbolic racism and higher modern sexism predicted stronger opposition to "hard" abortion (answering our exploratory questions; White β =.12, Latinx β =.19, Black β =.30 for symbolic racism, White β =.14, Latinx β =.26, Black β =.23 for modern sexism). These findings suggest that symbolic racism and modern sexism predicted opposition to abortion beyond religious predictors and that symbolic racism and modern sexism appear to covary closely.

To confirm this interpretation of our findings, we also conducted exploratory hierarchical linear regressions in which all religious predictors were entered in the first step and symbolic racism or modern sexism was entered in the second step (see Tables S3 and S4 in the online supplement for full details). Results showed that adding symbolic racism or modern sexism in the second steps predicted variance in opposition to "soft" abortion beyond the religious variables in all three samples (f^2 effect sizes ranged .023-.069). Symbolic racism or modern sexism also predicted additional variance in opposition to "hard" abortion beyond the religious variables in all three samples (f^2 effect sizes ranged .013-.096). Per the power



^{*}*p* < .05; ** *p* < .01; *** *p* < .001

analysis, there was adequate power to detect the size of the "soft" abortion f^2 values, thus these results were consistent with our hypotheses.

As one example of these findings to aid interpretation, Fig. 1 displays the estimated marginal means of opposition to "soft" abortion in the White sample when predicted by symbolic racism and religious salience (which was the strongest predictor of opposition to abortion in the White sample), controlling for religiosity. Figure 1 demonstrates how both religious salience and symbolic racism, as independent predictors of opposition to "soft" abortion, contributed to levels of individuals' opposition. We include this illustration to highlight how, within the same level of religious salience, those with symbolic racism scores in the highest third of the sample opposed abortion more strongly than those with symbolic racism scores in the lowest third of the sample. Moreover, even among those who endorsed little or no religious salience, those with the highest symbolic racism scores were more opposed to abortion (opposition = 1.59) than those with the lowest symbolic racism scores (opposition = 1.15). An interaction test was nonsignificant in all samples (p's > .60), in which an interaction term between z-scored symbolic racism and religious salience scores was added to the multiple regression predicting opposition to "soft" abortion). This test supported our interpretation that symbolic racism, as an independent predictor and while controlling for religiosity, predicted opposition to abortion in non-religious as well as religious participants. Said another way, the relation between symbolic racism and stronger opposition to abortion is not reducible to having stronger religiosity. While we did not test interactions between racism and sexism and all other religious covariates, as this would be outside the scope of our hypotheses, Fig. 1 illustrates one potential implication of racism and sexism being independent predictors of abortion attitudes while controlling for religiosity.

Study 2

Because the Study 1 findings were novel, it was critical to examine the extent to which the findings would replicate in an independent sample. We conducted a conceptual replication to test whether the relations would be sustained when tested using similar (but not identical) measures of symbolic racism, modern sexism, abortion attitudes, and religiosity. Additionally, Study 1 did not have data on individuals' political views. It was possible that political factors accounted for the variance in abortion attitudes that symbolic racism and modern sexism added beyond religiosity. Therefore, Study 2 also extended the prior findings by testing whether they held true while controlling for political ideology. Indeed, given that we argue that racism and sexism are powerful ideologies, a stringent test would account for political ideology, which in some studies (e.g., Adamczyk & Valdimarsdóttir, 2018) had a stronger relationship with abortion attitudes even than political party affiliation (e.g., Democrat, Republican). We hypothesized that symbolic racism and modern sexism would predict opposition to abortion when controlling for the effects of political ideology as well as religion. The analysis plans for this replication were preregistered prior to

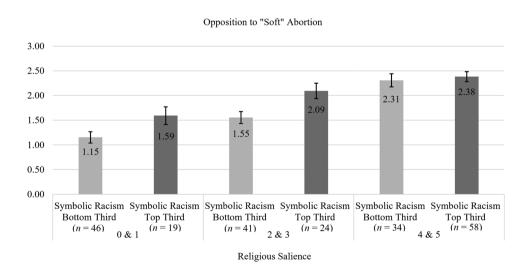


Fig. 1 Marginal Means Estimates of Symbolic Racism and Religious Salience Predicting Opposition to "soft" abortion in the White sample in Study 1. Note. For purposes of illustration, symbolic racism was partitioned into tertiles (bottom third, middle third, top third) and the six ratings on religious saliency were collapsed into three groups (i.e., how strongly participants feel about their religious/spiritual

identity rated 0=Not strongly at all to 5=Very strongly). ± 1 standard error bars displayed. n=number of participants per column. An interaction test was non-significant in all samples (p's>.60), which demonstrated that symbolic racism, as an independent predictor while controlling for religiosity, predicted opposition to abortion in non-religious as well as religious participants



accessing the 2012 ANES data (see preregistration at https://osf.io/dtkwv).

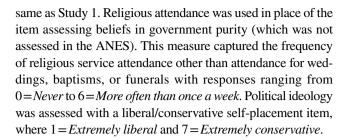
Study 2 Method

Participants

As described in the replication preregistration, we aimed to use a subsample of the 2012 ANES to approximate the Study 1 protocol and inclusion criteria. Specifically, we selected participants who: (1) completed the online version of the ANES, as one report suggested that socially desirable responding was evident in in-person data collection (Guggenheim et al., 2019); (2) completed the post-election survey, as this was the only timepoint that assessed symbolic racism and modern sexism; (3) self-identified as either Black, Latinx, or White race/ethnicity; and (4) completed the English-language ANES survey (as the ANES is also available in Spanish whereas Study 1 was not). Prior to analysis, 99 cases (3% of the eligible sample) were removed because they had more than 5% of data missing, resulting in a final sample of 3,162 participants for analysis. For brevity here, the demographic characteristics of the final sample of Black (n=500), Latinx (n=318), and White (n=2.344) participants are presented in Table S4 in the online supplement. Study 2 sample demographics were similar to those in Study 1 with respect to gender composition (though the Latinx sample in Study 2 featured more men [57%] than women [43%]), sexual identity, relationship status, employment, religious affiliation, age, and attitudes about abortion legality. The three racial/ethnic groups were diverse in their political composition (ranged 25%–35% liberal, 31%–47% moderate, and 18%-44% conservative) and mirrored national trends (with more individuals in the Black sample identifying as liberal or moderate versus more individuals in the White sample identifying as conservative).

Measures

Measures were selected that approximated those used in Study 1. All differences between the measures for Study 1 and Study 2 are described in the online supplement. Symbolic racism (4 items) and modern sexism (6 items) were shorter and differently worded versions of the Symbolic Racism Scale and Modern Sexism Scale. The 2012 ANES assessed two of the "soft" abortion conditions assessed in the GSS (i.e., financial strain and for any reason) and all three of the "hard" abortion conditions (i.e., two items for maternal health, one item for fetal defect, and one item for rape), which participants rated $1 = Favor\ a\ great\ deal\ to\ 9 = Oppose\ a\ great\ deal\ Religious$ affiliation, religious salience, and Biblical literalism beliefs were assessed with the same or similar items and coded the



Data Analysis

Data analysis strategies mirrored those in Study 1. As in Study 1 and in alignment with national polling on abortion attitudes, testing the assumptions of multiple regression revealed that both abortion outcome sub-scales were not normally distributed. The "soft" abortion scale distribution resembled a trimodal distribution (i.e., spikes in both of the tails and in the middle as many individuals were opposed to both items, supported both items, or supported one item and opposed the other), and "hard" abortion scores showed a positive skew (i.e., most participants supported the legality of "hard" abortion). Therefore, in addition to linear regression, we conducted sensitivity analyses in which "soft" abortion was analyzed as a polynomial outcome (i.e., a 3-level variable partitioned into bottom third, middle third, and top third tertiles) and "hard" abortion analyzed as an oppose vs. support median-split binary outcome (logistic multiple regression). The pattern of results did not differ in these sensitivity analyses, therefore coefficients from multiple linear regression models were reported as in Study 1 (see Table 4) rather than odd-ratios from logistic or polynomial regression.

We judged that each standardized effect size was successfully replicated if (a) the effect was different from the null (p < .05) in the same direction as the original effect and (b) the effect was similar to the original (i.e., as determined by being within the 95% confidence interval [CI] of the original effect size estimate in Table 3) or larger than the original. These two criteria corresponded with criteria #1 and #2 used in the Reproducibility Project (Open Science Collaboration, 2015).

Study 2 Results

Summary of Descriptive Statistics and Bivariate Relations

Tables S5 and S6 in the online supplement display means, standard deviations, reliabilities, and correlations among all variables (with 95% CIs around the correlations) in the racial/ethnic groups. White individuals differed from Latinx and Black individuals on their levels of opposition to "soft" abortion and "hard" abortion, which was not found in Study 1; however, all effect sizes were small (*d*'s ranged



 Table 4
 Study 2 Regressions Predicting Opposition to Abortion

Predictor (score range)					Depend	lent variable: A	Dependent variable: Abortion condition	uo				
			Replication results	on results					Adding political ideology	al ideology		
	Primary l	Primary hypotheses		Exploratory follow-up	dn-wolloj /		Primary hypotheses	potheses		Exploratory follow-up	dn-wollo	
	"Soft"	"Hard"	"Soft"	"Hard"	"Soft"	"Hard"	"Soft"	"Hard"	"Soft"	"Hard"	"Soft"	"Hard"
White Sample $(n=2344)$												
Conservative Christian Religion	***60.0	0.13***	***80.0	0.13***	0.09***	0.14***	***80.0	0.13***	0.08***	0.12***	0.08***	0.13***
Religiously Unaffiliated	-0.02	0.11***	-0.01	0.12***	-0.03	0.11***	-0.01	0.11***	-0.01	0.12***	-0.02	0.11***
Religious Salience	***60.0	0.09***	***60.0	***80.0	0.10***	0.09***	****20.0	0.07***	0.07***	0.07***	0.07***	0.07***
Biblical Literalism	0.28***	0.26***	0.28***	0.26***	0.31***	0.28***	0.23***	0.22***	0.23***	0.22***	0.24**	0.22***
Religious Attendance	0.22***	0.31***	0.24***	0.33***	0.19***	0.30***	0.18***	0.28***	0.28***	0.23***	0.29***	0.22***
Political Ideology	I	I	I	I	ı	I	0.26***	0.22***	0.19***	0.28***	0.16***	0.28***
Symbolic Racism	0.17***	0.07***	0.23***	0.12***	I	I	***60.0	0.002	0.12***	0.03	I	ı
Modern Sexism	0.13***	0.11***	I	I	0.21	0.14***	***80.0	0.07***	I	I	0.11***	0.07***
Adjusted R^2 for Model	0.41	0.35	0.40	0.34	0.39	0.35	0.45	0.38	0.45	0.38	0.45	0.38
Latinx Sample $(n=318)$												
Conservative Christian Religion	-0.06	-0.06	-0.06	-0.04	-0.07	-0.04	-0.05	-0.03	-0.05	-0.02	-0.05	-0.03
Religiously Unaffiliated	-0.05	-0.01	-0.05	0.01	-0.04	0.01	-0.03	0.03	-0.02	0.04	-0.02	0.03
Religious Salience	0.14*	0.10	0.14*	0.10	0.14*	0.10	0.14*	0.10	0.14*	0.10	0.14*	0.10
Biblical Literalism	0.24***	0.27***	0.25***	0.28	0.26***	0.27***	0.23***	0.26***	0.23***	0.26***	0.24**	0.26***
Religious Attendance	0.17**	0.30***	0.17**	0.30***	0.18**	0.30***	0.14*	0.27***	0.19***	0.19***	0.21***	0.17**
Political Ideology	I	I	I	I	I	I	0.19**	0.18**	0.14*	0.27***	0.13*	0.27***
Symbolic Racism	0.15**	0.03	0.17***	0.10*	I	ı	0.10	-0.02	0.10	0.002	I	ı
Modern Sexism	0.04	0.08	I	I	0.11*	0.03	0.01	0.05	I	I	0.05	0.04
Adjusted R^2 for Model	0.24	0.28	0.24	0.29	0.23	0.28	0.27	0.31	0.27	0.31	0.26	0.31
Black Sample $(n = 500)$												
Conservative Christian Religion	-0.08	-0.15***	-0.09	-0.16***	-0.08	-0.14**	-0.09	-0.16***	*60'0-	-0.16***	-0.09	-0.15**
Religiously Unaffiliated	0.05	-0.06	0.04	-0.07	90.0	-0.03	0.04	-0.07	0.03	-0.08	0.04	-0.05
Religious Salience	0.22***	90.0	0.21	0.04	0.23***	0.07	0.21	0.04	0.19***	0.03	0.21***	0.05
Biblical Literalism	0.13**	0.20***	0.14**	0.21***	0.14**	0.23***	0.13**	0.20	0.14**	0.21***	0.14**	0.23***
Religious Attendance	0.20	0.16**	0.20***	0.16**	0.20	0.15**	0.19***	0.15**	0.12**	0.11**	0.13**	0.14**
Political Ideology	I	1	1	1	1	I	0.12**	0.11**	0.19***	0.15**	0.19***	0.13*
Symbolic Racism	*60.0	0.23***	0.13**	0.25***	I	I	0.07	0.21	0.10*	0.23***	I	I
Modern Sexism	0.10*	0.07	I	I	0.13**	0.15***	0.10*	0.07	I	I	0.12**	0.14***
Adjusted R ² for Model	0.18	0.19	0.17	0.19	0.17	0.15	0.19	0.20	0.18	0.20	0.19	0.17

For simplified presentation, only standardized β coefficients are displayed and leading zeros (0.) are omitted. See Supplement for unstandardized coefficients and 95% confidence intervals. No. of participants (n) for the models testing the primary hypotheses are displayed. **Bold** values fully replicated Study 1 findings





0.15–0.16) and significant likely due to the relatively large White sample. Levels of symbolic racism and modern sexism differed across the three groups, with patterns and effect sizes mirroring Study 1. The reliability of scores on the symbolic racism and modern sexism measures were lower than in Study 1, as evidenced by alpha's that ranged between .60–.68 in the Black and Latinx samples, which fell below the commonly employed .70 minimum threshold of adequate reliability. The correlations between symbolic racism and modern sexism were smaller (Black r= .36, Latinx r= .49, White r= .47), as determined by falling below Study 1's 95% CIs. Given the importance of matching the measures used in Study 1, we proceeded with the analyses despite this less-than-ideal scale performance.

At the bivariate level, higher symbolic racism and modern sexism were related to stronger opposition to "soft" and "hard" abortion in Black (*r*'s ranged .12–.27), Latinx (*r*'s ranged .15 –.24), and White individuals (*r*'s ranged .25–.36) with small to medium effect sizes (Tables S5 and S6), which replicated the pattern of significant findings and were within the 95% confidence intervals of Study 1 with three exceptions. In the Black sample, the relation between symbolic racism and "soft" abortion was smaller than in Study 1, and in the Latinx sample, the relations between modern sexism and "soft" and "hard" abortion were smaller than in Study 1 (i.e., the values fell below the 95% CI in Study 1). In all samples, all or most of the religion variables were associated with each other and with opposition to abortion in the expected directions.

Replicating Study 1 Findings

The left half of Table 4 displays bolded values where Study 1 findings were replicated in Study 2 (as indicated by a statistically significant relationship of the size that fell within Study 1's 95% CI). In the White and Black samples, symbolic racism and modern sexism both predicted opposition to "soft" abortion while controlling for religious predictors, consistent with our hypotheses (White $\beta = .17$, Black $\beta = .09$ for symbolic racism, White $\beta = .13$, Black $\beta = .10$ for modern sexism). In the Latinx sample, only symbolic racism predicted opposition to "soft" abortion (β =.15). Among White participants, symbolic racism $(\beta = .07)$ and modern sexism $(\beta = .11)$ also predicted opposition to "hard" abortion, while for Black participants, only symbolic racism predicted opposition to "hard" abortion (β = .23), and among Latinx participants, neither symbolic racism nor modern sexism did. Although small, many of these effect sizes fell within the 95% confidence intervals for Study 2 when symbolic racism and modern sexism were tested independently (we did not attempt to replicate the findings from simultaneous regression in Study 1 as they were largely found to be non-significant, and the goal was to replicate significant findings). See Tables S7 and S8 in the online supplement for full results of Table 4.



As shown in the right half of Table 4, in the White sample, both symbolic racism ($\beta = .09$) and modern sexism ($\beta = .08$) predicted opposition to "soft" abortion beyond religious and political predictors, which was consistent with our hypotheses. However, only modern sexism predicted opposition to "hard" abortion (β =.07); symbolic racism did not when controlling for religious and political factors. In the Black sample, modern sexism predicted opposition to "soft" abortion while controlling for religious and political factors ($\beta = .10$), while symbolic racism predicted opposition to "hard" abortion (β = .21). Hierarchical regressions confirmed these interpretations. Like in Study 1, when tested independently, both symbolic racism and modern sexism had significant relations with "soft" and "hard" abortion in the Black sample, but not together (see the latter half of Table 4; symbolic racism– "soft" abortion β =.10, symbolic racism– "hard" abortion $\beta = .23$, modern sexism—"soft" abortion $\beta = .12$, modern sexism—"hard" abortion β =.14). In the Latinx sample, neither symbolic racism or modern sexism predicted opposition to abortion when controlling for religiosity and political ideology. In a sensitivity analysis suggested by a reviewer, findings were unchanged when political partisanship (where $1 = Strong\ Democrat$ to $7 = Strong\ Republican$) was used in place of political ideology (see Table S9 in the online supplement).

Discussion

Roughly 24% of U.S. women have an abortion by age 45 (Jones & Jerman, 2017). In the U.S., people's attitudes toward abortion play a significant role in how they vote and what political party they identify with (Carmines & Woods, 2002; Goren & Chapp, 2017). Attitudes about whether (and under what circumstances) abortion should be legal have profound implications for women's health, women's equity, and human rights. Thus, psychologists should attend to the structure of abortion attitudes as well as their implicit dimensions. Building on research regarding the racist imagery associated with other relevant political attitudes (e.g., welfare; Rosenthal & Lobel, 2016), we sought to understand how historically-rooted racist and sexist attitudes continue to shape Americans' attitudes about the conditions under which abortion should be legal.

Over half of Americans oppose legal abortion under the so-called "soft" conditions (i.e., those which may be understood as within a woman's control). We hypothesized that antipathy and resistance to the equality of African Americans (symbolic racism) and women (modern sexism) would



predict opposition to "soft" abortion because these conditions align with pervasive negative stereotypes about Black women's sexuality, women's sexuality in general, and motherhood. Consistent with our hypotheses, White participants' opposition to legal abortion under "soft" conditions was stronger among those higher in racism and sexism while controlling for religiosity (Study 1 & 2) and political ideology (Study 1).

We also examined attitudes towards abortion under the so-called "hard" conditions (i.e., those conditions understood as potentially outside of a woman's control). Over two-thirds of Americans support legal abortion under "hard" conditions (Jozkowski et al., 2018), so we were unsure whether racist attitudes would predict individuals' attitudes towards "hard" conditions considering that most individuals are in favor of them. Modern sexism remained a predictor of opposition to "hard" abortion beyond religiosity and political ideology in the White sample, which was consistent with our hypotheses that modern sexism would predict opposition to abortion, even under "hard" conditions. The relations between modern sexism and opposition to abortion under "soft" as well as "hard" conditions for White individuals is a novel finding and adds to previous research demonstrating that ambivalent sexism predicts opposition to abortion. Our results showed that denial of discrimination (e.g., "On average, people in our society treat men and women equally") and resistance towards women's liberation (e.g., "It is easy to understand the anger of women's groups in America" [reversed]) also go hand-in-hand with opposition to abortion. This underscores the fact that efforts to improve abortion access will be ineffective among those who deny or underestimate that gender equality is a social issue. Symbolic racism also related to opposition to abortion legality for "hard" conditions; however, this effect was at times explained in Study 2 by the inclusion of religiosity (in the Latinx samples), political ideology (in the White sample), or modern sexism (in the Black sample).

The pattern of findings observed in the Black sample in Study 2 were less clear compared to the findings reported in the White sample. In answer to our exploratory questions about Black participants' opposition to abortion, we found that symbolic racism and modern sexism predicted opposition to legal abortion under "soft" and "hard" conditions while controlling for religiosity (in Studies 1 & 2) and political ideology (in Study 2), but not necessarily while controlling for the effect of each other (in both studies). This indicates that sexist or racist ideologies related to opposition to abortion beyond religious and political factors in Black individuals, but how they related to each other complicates this picture. This may not be unexpected, considering the concepts of symbolic racism and modern sexism were developed in predominantly White samples and from a theoretical political framework that centered White voters (Henry & Sears, 2002; Swim et al., 1995). Both (shortened) measures of symbolic racism and modern sexism in Study 2 evidenced sub-standard or borderline reliability in the Black sample in Study 2, and unlike the longer validated measures, they have not been tested for measurement invariance (Davis et al., under review); however, the benefits of the replication sample outweighed the uncertainty about the measurement. Study 2 used data from 2012 whereas Study 1 data were collected in 2020, which could have affected replication. It is possible that racism, sexism, and abortion attitudes have become more correlated over time across diverse racial/ ethnic groups as individuals' attitudes about race and gender have become more polarized in the past decade (Pew Research Center, 2020). For example, Holman et al. (2020) found that, in line with this increased polarization, there was a stronger relation between partisanship and abortion attitudes in a national sample of Latinx adults in 2014 than in 2006. We further reflect on the strengths and limitations of research in diverse groups below in the Limitations section.

In the Latinx sample, the relations between racism, sexism, and abortion attitudes were less consistent and smaller in Study 2 as compared to Study 1. We see several possible reasons for this pattern. First, researchers have documented the complex difficulties of translating surveys from English to Spanish and how language affects political opinion polling results even while controlling for acculturation or generational status (Lee & Pérez, 2014). Abortion concepts have different connotations and meanings across English and Spanish language that are nuanced and difficult to parse (e.g., "pro-choice" in English has the connotation of "proelective abortion" [pro-elección] in Spanish; Solon et al., under review). Although both studies were restricted to only English-survey takers to try to limit these issues, we did not have information about the language context in which abortion was learned about and discussed for Latinx participants in either study. Second, the 2012 ANES recruited U.S. citizens aged 18 or older. It is possible that in Study 1, some participants may have been U.S.-residing but not U.S. citizens. Attitude differences between citizens and non-citizens may be a function of acculturation-related factors such as participants' generational status in the U.S. or country of origin (Abrajano & Alvarez, 2011; Branton et al., 2014). Finally, other research about abortion among Latinx adults has similarly encountered inconsistencies in results across national surveys (Holman et al., 2020), perhaps another indicator of the difficulties of doing research with such a diverse population. Considerable future research on abortion attitudes in Latinx samples is needed to fully understand the complex relationships between language, acculturation, religiosity, politics, and abortion attitudes.

The pattern of results appears to suggest that social reasons for abortion ("soft" reasons) are most consistently predicted by social attitudes (i.e., symbolic racism and modern

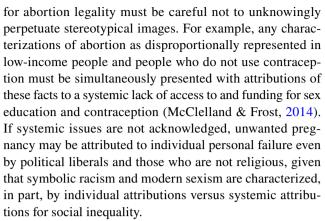


sexism) in Black and White individuals (and in the Latinx individuals when not accounting for religiosity or political ideology). In contrast, opposition to "hard" abortion was less consistently and weakly predicted by symbolic racism (though they were related in the Black sample). Because symbolic racism attributes social inequality to individual responsibility, it is possible that "hard" abortion conditions would not be influenced by racist attitudes because "hard" conditions are imagined to be outside of a woman's control (Rossi & Sitaraman, 1988), and thus the two would be unrelated. This may explain the less consistent and weaker relations between racism and "hard" abortion once accounting for religion and political ideology. To explain the presence of a relationship (even if weak), we argue that perhaps all sexual activity that results in pregnancy, even rape or fetal defect, is thought of by some as a matter of women's individual (ir)responsibility. Jozkowski et al. (2018) found that some participants reported that abortion would not be permissible under any circumstances and in one instance stated, "I think that when you have sex you are making a decision that you could get pregnant afterwards, and she needs to deal with the consequences for her actions" (p. 474). Even in the case of rape, while most people might imagine it is not the woman's fault and might support an abortion, others may nevertheless victim-blame and believe the woman should not have placed herself in a situation to be raped (Ross & Solinger, 2017). Thus, both racist and sexist stereotypes about Black women's sexual promiscuity and irresponsibility may then apply even to "hard" abortion conditions (Rosenthal & Lobel, 2016), which would explain why, for some participants, symbolic racism and modern sexism predicted opposition to "hard" abortion.

Practice Implications

The findings of this research demonstrate that abortion is not simply an issue of conservative religious or political identity (Adamczyk et al., 2020; Jelen & Wilcox, 2003). For policy makers, activists, and anyone concerned with access to abortion in the U.S., these findings have two primary implications: (1) that racist and sexist ideologies may have an impact on abortion attitudes in White and Black individuals; and (2) seeing the relations between racism and sexism and abortion opposition increases our collective understanding of attitudes beyond the political and religious foundations of abortion attitudes.

Regarding our first implication, our results highlight the presence of a relation between racist and sexist ideologies and abortion opposition across racial/ethnic groups, religious factors, and political ideologies. Keeping this in mind, policy makers, activists, and others who are fighting



Our findings also offer deeper insight into how individuals make links between broad ideologies and attitudes towards specific policies. In other words, individuals' attitudes towards abortion are often simply imagined to be a function of their religious and/or political lives. These groupings of individuals into conservative Christian groups or political conservatives may offer easy prediction of their abortion attitudes, but these groupings do not tell us enough about the specific ideologies that people within these affiliative groups draw on when making or maintaining their abortion attitudes. Understanding the psychological meaningmaking behind group categories is critically important. For example, Hodson and MacInnis (2017) found that sexism mediated the relation between conservatism and abortion opposition. The authors argued "legitimizing myths" (e.g., sexism) justify and facilitate the connections that individuals make between ideologies (like conservatism) and policies (like abortion attitudes). Furthermore, understanding the specific attitudes that might underlie group affiliations has implications for understanding the opposition to political causes or policies designed to make U.S. society more equitable. For example, Green et al. (Green et al., 2006) found that White participants with high levels of symbolic racism supported tough, punitive crime policies and also opposed preventive policies. The authors concluded, "Our results provide clear evidence that respondents cognitively associate Black [people] with the problem of crime and its possible remedies" (p. 447). It is not enough to know that individuals with conservative ideologies oppose abortion; understanding that specific ideologies, like racism and sexism, operate in tandem with abortion opposition reveals more about the meaning-making individuals bring to their opinions about abortion.

Limitations and Future Directions

Being that the data were cross-sectional, this study provides the first evidence that racism in addition to sexism may play a role in the development and maintenance of abortion attitudes, and many future directions are warranted. First,



future studies with more complex designs (e.g., experimental research, longitudinal research) are encouraged to build on these findings by investigating the temporal and cause-and-effect relations among these variables. Given the complexity of abortion attitudes (Jozkowski et al., 2018), and the importance of understanding them, we encourage future research on exactly what and whom people imagine when they respond to survey items about abortion. This might be accomplished through a cognitive debriefing method or using picture stimuli participants can match to the imagined "woman" in the survey question. Like research on images associated with welfare recipients (Brown-Iannuzzi et al., 2017), these kinds of data would offer greater insight into the unconscious imagery that may fuel who is at the center of a person's abortion attitude.

Secondly, many future directions are warranted regarding how racism and sexism are conceptualized and tested. In Study 1, symbolic racism and modern sexism were strongly correlated, which was somewhat unexpected. Study 2 found correlations to be more modest in size, though still strong, which was consistent with prior studies (e.g., r = .47 in Wedell & Bravo, 2021). Low reliability values for the symbolic racism and modern sexism scales in the Black and Latinx samples in Study 2 (which were shorter and appeared face-valid but were not equivalent to Study 1) may have also impacted our findings in unknown ways. Prejudices are unique from each other, but they also have common variance attributed to a preference for preserving the current social hierarchy (see generalized prejudice, authoritarianism, and social dominance orientation; Bergh & Akrami, 2017). One prior study found that a specific form of prejudice (i.e., sexism) mediated the relation between common prejudice (i.e., social dominance orientation) and opposition to abortion, suggesting that specific forms of prejudice serve as justifying beliefs for more generalized forms of prejudice (Osborne & Davies, 2009). Thus, future researchers are encouraged to investigate the interactions between generalized prejudice and the specific prejudices investigated here (racism and sexism) to further clarify the relations between forms of prejudice and their effect on abortion attitudes. Relatedly, a strength of our study was that we demonstrated relations between the distinct (but related) constructs of racism, sexism, and abortion attitudes. Future research might also consider the utility of assessing racism and sexism as intersecting constructs (e.g., gendered racism).

Finally, a strength of this study was its exploration of racist and sexist ideologies among racial/ethnic minorities, whereas much past research on symbolic racism and modern sexism has focused on White individuals. The results suggested that these ideologies exhibit relations with abortion attitudes in Black and Latinx individuals, which highlights the ways these ideologies can spread across groups (Howard & Sommers, 2015). However, we are cautious in implying

that all facets of symbolic racism theory apply to populations that are themselves targeted by racism. Kam and Burge (2017) argued that symbolic racism in Black individuals is primarily characterized by attributing systemic inequality to individual failures. Future researchers are encouraged to continue to consider how to conceptualize symbolic racism and modern sexism in ways that account for minoritized groups' viewpoints (Davis et al., 2022).

Conclusion

Considering these findings, we argue that denial of discrimination, resistance towards demands for equality, and attributing racial and gender disparities to these groups' own essentialized characteristics (e.g., a lazy work ethic, the need to be mothers) plays a role in how White and Black individuals think about abortion legality. This was especially true for individuals' opposition to abortion for social and economic reasons (the so-called "soft" reasons). In other words, we found evidence of psychological factors that play a role in how abortion attitudes operate that are outside of religious and political identifications. Racism and sexism appeared related to opposition to abortion in Latinx individuals as well, but this relationship was more nuanced and requires further research.

Overall, the findings demonstrate three key points: (1) racism and sexism are related to abortion attitudes, and these relations appear to be similar (though not identical) across Black and White racial/ethnic groups; (2) though individuals' attitudes towards abortion are often simply imagined to be a function of their religious and/or political affiliations, this study offers possible specific ideologies (racism and sexism) that people within and across these affiliative groups might draw on when making or maintaining their abortion attitudes; and (3) efforts to understand attitudes towards abortion must account for the roles of racism and sexism or risk overlooking how negative stereotypes may implicitly shape political attitudes like abortion. This last point speaks to the limitations of approaching abortion attitudes as an issue of purely religious and/or partisan identity (in research, policy, or advocacy efforts). At a minimum, it means an important political opinion (abortion) is not fully understood and our science is poorer for it. At worst, failing to recognize the role of racism and sexism in political attitudes results in continued willful ignorance about how oppressive beliefs can be formed and maintained.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s11199-022-01328-8.

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Authors' Contributions Author contributions were as follows: (i) Conception and design (MRB, SIM, KNJ); (ii) Data collection (SIM); (iii) Data analysis and interpretation (MRB); (iv) Manuscript drafting and revising (MRB, SIM); (v) Approval of final version for submission (MRB, SIM, KNJ).

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Data Availability Survey materials as seen by participants, data in CSV and SPSS format, and codebook are available at https://osf.io/6ukrg/.

Code Availability SPSS syntax is available via the OSF link above.

Declarations

Ethics Approval This study was approved by the University of Michigan Institutional Review Board. Informed consent was obtained from all individual participants included in the study.

Conflicts of Interest/Competing Interests The authors have no relevant financial or non-financial interests to disclose.

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