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Punishing Women for Miscarriage: The role of Political Orientation and Hostile Sexism

Jocelyn Chalmers¹ · Leif Woodford¹ · Robbie M. Sutton¹

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Abstract

Women's reproductive autonomy is an ideologically divisive issue, and this divisiveness goes beyond just attitudes toward abortion to include other outcomes such as miscarriage. Previous research has established that hostile sexism is positively associated with punitive attitudes toward pregnant women who flout conventional pregnancy proscriptions. Across three studies ($N_1 = 296$; $N_2 = 580$, $N_3 = 308$) we conceptually replicated this research while shifting the focus from abstract attitudes to concrete policies punishing women for miscarriage, and moving beyond hostile sexism to examine the role of political orientation (including libertarianism). In all three studies, hostile sexism remained a significant positive predictor of support for punishing women for miscarriage even after controlling for political orientation. Conservative and libertarian self-identification were positively associated with support for punishment at zero-order, and in multiple regressions adjusting for sexism and demographic variables, conservatism remained significantly positively related to support for punishment in two studies. Libertarianism was no longer a significant predictor of support for punishment after adjusting for sexism; with this in mind, we conducted mediation analyses and found significant indirect paths from libertarian identification through hostile sexism in two of the three studies. These findings provide evidence for the role of sexism and political ideology in the increasingly punitive post-Roe vs. Wade United States.

Keywords Miscarriage · Punishment · Conservatism · Libertarianism · Sexism · Reproduction

In March of 2016, then-U.S. presidential candidate Donald Trump was asked by MSNBC political commentator Chris Matthews whether women who undergo abortions when the procedure is banned should be subject to punishment. Though he later retracted the comment, at the time Trump claimed that women must face “some sort of punishment” (Bump, 2016, para. 2). When further asked whether the man who got the woman in question pregnant should be held responsible under the law, Trump responded “Different feelings. Different people. I would say no.” (para. 4). Despite the later reversal of these comments by the presidential hopeful, this punitive attitude towards pregnant women appears to be widespread; what is more, it does not appear to be limited to those who seek banned abortions, but rather targets women who engage in action that may threaten the life or health of the foetus. The current studies aim to investigate

the psychological factors underpinning the desire to punish pregnant women by examining whether hostile sexism and political orientation are related to support for punishing women for their miscarriages. In this section, we briefly outline the current landscape of punitiveness toward pregnancy and miscarriage, before considering the psychological and political bases of punitive attitudes, and outlining the guiding hypotheses of the present research.

Pregnancy and Punitiveness

The notion that pregnant women should be punished for their behavior extends beyond the matter of abortion and is implemented in law. In recent years, for example, the US has seen increases in policies designed to punish pregnant women for substance abuse (Carroll et al., 2021). More than half of states have “fetal homicide” laws that hold women criminally responsible if their behavior is thought to have played a causal role in a miscarriage or stillbirth (Browne, 2018). While miscarrying a pregnancy is common and often

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outside the individual's control, it can become the responsibility of the woman to "prove" both that the miscarriage was involuntary (and not an abortion), and that her actions did not play a causal role (Browne, 2018). The behavior in question in these laws is often illicit drug use, but can also include the use of prescription medication such as painkillers or Adderall, and even behavior as seemingly innocuous as falling down a flight of stairs (Baldwin, 2022).

In some U.S. states, the law is especially punitive. For example, if a woman in Alabama has a miscarriage or stillbirth and is found to have used drugs during her pregnancy, she can be sent to prison for up to 99 years (Kilander, 2022). These laws are sometimes enforced zealously, with seemingly unjust consequences. In 2022, a woman in Alabama filed a lawsuit on the grounds that she had been jailed for 36 h for allegedly using drugs during pregnancy, despite not actually being pregnant at all (Yurkanin, 2022). In another seemingly egregious example, Marsha Jones of Alabama was five months pregnant when she was shot in the abdomen, killing the fetus. While the shooter walked free Jones was indicted for manslaughter after police accused her of initiating the fight (Bryant, 2019).

Though the punitiveness of these laws and the enthusiasm with which they are enforced varies between states, the apparent zeal for punishing pregnant women is by no means confined to a few states, or even to the United States as a whole. In fact, the United States is far from the only country in the world that employs these kinds of draconian laws, and some countries are even stricter. In El Salvador in 2008, 33-year-old Manuela sought treatment at a hospital after experiencing a miscarriage and was sentenced to 30 years in prison for homicide; she died in jail two years later (Levinson-King, 2021). Given these severe consequences for women, it is therefore important to understand the psychological bases for support of the punishment of pregnant women.

Psychological Bases of Punitive Attitudes to Miscarriage

Much previous research suggests that when a woman becomes pregnant, she enters a period of enhanced scrutiny and restriction. Sutton et al. (2011) claimed that restrictive health guidance can foster an environment in which many behaviours are deemed unsafe for pregnant women, and it thereby becomes acceptable for policy makers and the general public to prevent pregnant women from exercising free choice to protect their unborn babies. For instance, despite evidence that light alcohol consumption during pregnancy (after the first trimester) may be harmless (Henderson et al., 2007), guidance from governments in the United Kingdom, United States, and Canada dictates that women should abstain from alcohol entirely during pregnancy. In fact, Crandall et al. (2002) found that

women who drink alcohol during pregnancy were viewed as one of the social groups for whom it was most acceptable to hold negative attitudes toward, even more than drug dealers, adulterers, and gang members.

The scrutiny and restriction of pregnant women takes place against a backdrop of public misunderstanding of miscarriage and its causes. In a survey of almost 1100 women and men in 48 U.S. states, 55% of respondents believed miscarriages to be "rare" despite happening in 25% of pregnancies. In addition, even though most miscarriages are caused by chromosomal abnormalities, 76% of respondents believed that stressful events frequently cause miscarriages, and 64% believed miscarriages are commonly due to lifting heavy objects. This misinformation is not without consequence: the survey also found that 40% of respondents who had experienced a miscarriage thought that they were somehow responsible, and many reported feelings of guilt and shame (Hand, 2013).

Gaps in the understanding of miscarriage and its causes may leave room for ideological preferences and preconceptions to operate. A considerable body of scholarship has accumulated to suggest that idealised social constructions of motherhood, captured under the term 'normative motherhood,' may be especially potent. O'Reilly (2016) argues that normative motherhood is defined by assumptions such as essentialization (e.g., all women desire to be mothers), naturalisation (e.g., maternal ability is natural and comes easily to all mothers), and idealization (e.g., every mother finds purpose and joy in motherhood). After children are born, this view of motherhood can translate into what Hays (1996) termed intensive mothering, referring to the demanding expectations put on mothers to engage in emotionally absorbing, expert-guided, labour-intensive parenting practices. This can put extreme normative pressure on mothers, who are subject to guilt and stress when they perceive that they are falling short of these idealized expectations (Warner, 2005), and to blame and condemnation by others, who have been shown to be more likely to blame mothers than fathers when something "goes wrong" with their children (Jackson & Mannix, 2004). Reiheld (2015) argues that the pressure to be a "good mother" whose every action must be aimed at maximising the good of the child comes into play well before the child in question is born, and that the ultimate "bad mother" in this situation is one who miscarries when she could have avoided doing so. Miscarriage in and of itself tragically represents a failure to be the ideal mother, and more so if the woman is believed to have caused it through her own actions.

Scholars have argued that this idealization of motherhood can be viewed as a way to control women's sexuality and fertility (e.g., Fox, 1977; Rothman, 1994), which occurs alongside more overt forms of social control such as the pressure to dress modestly, avoid male peers, and express

no curiosity about sex (Marcus & Harper, 2015). The idealization of motherhood can place women's rights and interests below those of their child (or fetus), while women's choices are simultaneously undermined or put in the hands of others (Sutton et al., 2022). Women who do not conform to its expectations are derogated: Pacilli and colleagues (2018) found that a woman's decision to abort a fetus not only reduced her perceived humanness in the eyes of others, it also lowered her perceived competence in female-stereotyped professions, likely because she was violating the norms of the ultimate role of motherhood for women.

Ambivalent Sexism and Punitive and Proscriptive Attitudes toward Pregnant Women

The desire to control women's fertility and sexuality has been linked to a fundamental feature of gender dynamics across societies: men have long maintained physical and structural power over women but are still dependent upon them for reproduction. Noting this interdependence between men and women led Glick and Fiske (1996) to propose ambivalent sexism theory, which suggests that, rather than straightforward prejudice, sexism is comprised of a subjectively positive "carrot" through benevolent sexism, coupled with an overtly negative "stick" through hostile sexism. Hostile sexism suggests that women manipulate men by trapping them in relationships or accusing them of discrimination, while benevolent sexism suggests that women are purer and more moral than men, and that men should protect and provide for women (*if* they live up to expectations of femininity).

The relationship between ambivalent sexism and attitudes towards pregnancy and reproduction has been explored to some extent in prior research. Osborne et al. (2022) argue that the reverent, paternalistically chivalrous attitudes towards women embodied by benevolent sexism reliably undermine support for women's reproductive rights, even among women themselves and even in situations where carrying a pregnancy to term could potentially endanger the mother's life. In support of this argument, Sutton et al. (2011) found that benevolent (but not hostile) sexism was linked to greater perceptions of risk during pregnancy, as well as greater self-reported willingness to restrict the freedom of pregnant women by obstructing them from doing things that are perceived to be present health risks (e.g., refusing to serve them soft cheeses). Benevolent sexism has been consistently associated with opposition to abortion (Huang et al., 2014, 2016), and some research suggests that the valorization of self-sacrificial motherhood may be responsible (Osborne et al., 2022; Sutton et al., 2023).

In contrast to benevolent sexism, hostile sexism appears to be associated specifically with attitudes and policy positions that give men control over the outcomes of pregnancy. For example, Petterson and Sutton (2018; also Chalmers et al., 2023) found that those high in hostile sexism supported men's right to veto a partner's abortion *and* to financially coerce her into getting an abortion. The implications of these policy positions for abortion are diametrically opposed, but their gendered implications are consistent: both give men power over women's choices.

Hostile sexism has also been found to be associated specifically with punitive attitudes to pregnant women, Murphy et al. (2011) focused specifically on the association between sexism and proscriptive beliefs about activities pregnant women should not partake in, such as drinking alcohol, consuming seafood, or undertaking strenuous exercise. While both hostile and benevolent sexism were positively associated with endorsement of conventional proscriptions, only hostile sexism was positively associated with punitive attitudes toward pregnant women who flout these proscriptions. These authors reasoned that people who endorsed benevolent sexism were likely attracted to the protective function of pregnancy proscriptions, while those who endorsed hostile sexism were likely drawn to the derogatory and disempowering nature of behavioural proscriptions and the opportunity to punish women who do not follow them.

This relationship between hostile sexism and the desire to punish women who "misbehave" makes sense when one considers the content of hostile sexism. Glick and Fiske (1996) suggest that hostile sexism portrays men and women as engaged in a struggle for power, and the items on the hostile sexism scale depict women as manipulating men and taking advantage of them in their desire to gain power over them. Sibley et al. (2007) also stress that hostile sexism is rooted in a highly competitive worldview which motivates men to strive for intergroup dominance over women. Murphy et al. (2011) claim that one of the functions served by pregnancy proscriptions is implying that women are not capable of making safe and appropriate choices on their own terms, thereby belittling women, and limiting their autonomy. Indeed, in Murphy et al.'s (2011) research, the relationship between hostile sexism and punitive attitudes toward women held when controlling for other factors such as the perceived health risks for mother and baby associated with flouting proscriptions. Petterson and Sutton (2018) likewise found that hostile sexism was associated with support for male control over abortion decision-making independent of opposition to abortion, suggesting that the desire to exert control over women was likely a central motivating factor for those who endorsed hostile sexism in both of these cases.

Research is still lacking, however, as to how these punitive attitudes may translate into punishing women for miscarriage – a scenario which, unlike flouting pregnancy

guidelines, is both possible and actively practiced in legal systems in the United States and elsewhere (e.g., Browne, 2018). In addition, looking beyond the influence of sexism, it remains to be seen how political orientation may be playing a role in these attitudes, particularly given the highly polarised nature of the United States when it comes to women's reproductive autonomy. Examining the role of political orientation is particularly important given that it is within the political realm where abstract attitudes such as sexism are translated into concrete laws and policies, thereby impacting women's lives in material ways.

The Ideology and Politics of Punishing Women for Miscarriage

Women's reproductive autonomy is a heavily politicised issue, particularly in the United States. While the divide between Democrats and Republicans has not always been so stark, since the 1990's, support for a women's right to abortion has fallen neatly along partisan lines, with liberals in support and conservatives in opposition (Osborne et al., 2022). As of 2020, polling data suggests that 62% of Republicans believe abortion should be illegal in all or most cases, while an overwhelming 82% of Democrats say it should be legal in all or most cases (Diamant, 2020). The anti-abortion stance of conservatives has been linked with their tendency to be more religious, to favour the status quo, and to be accepting of inequality – including inequality between men and women. In fact, Hodson and MacInnis (2017) found that sexism mediated the relationship between conservatism and opposition to abortion, suggesting that sexism serves as a “legitimising myth” that allows conservatives to justify limiting women's access to power, resources, and freedoms (including abortion).

While there is a dearth of research on the associations between conservatism and punishing women for miscarriage specifically, previous research suggests that conservatives are more punitive than liberals overall. Conservatives are more likely than liberals to support the death penalty (Sandys & McGarrell, 1995) and harsh punishments for offenders (Carroll et al., 1987), and to attribute offenders' behavior to personal choice rather than situational factors (Pickett & Baker, 2014; Unnever & Cullen, 2010). There is some evidence that conservatives' punitive views could be due to their relatively greater endorsement of group-oriented values including authority, loyalty, and purity (Haidt et al., 2009): Silver and Silver (2017) claim that endorsing these group-oriented values results in higher levels of punitiveness, as proponents may view crime as a transgression against society at large.

Beyond liberalism and conservatism, there is one political philosophy that should theoretically be opposed to these

controlling and punishing attitudes: libertarianism. Libertarianism is a political and moral philosophy which states that society should be organized around the principle of individual liberty. In the political landscape of the modern-day United States, libertarians are often loosely described as fiscally conservative (e.g., opposed to paying taxes) and socially liberal (e.g., supportive of drug legalization; Iyer et al., 2012). According to the tenets of libertarianism, the sole purpose of government is the protection of individual rights, and no person or group's needs should ever impose a moral duty on (and thus violate the rights of) a different person or group (Boaz, 2020). Based on this emphasis on liberty, one might assume that libertarians should be steadfastly against punishing women for miscarriage. Indeed, libertarianism emphasises self-ownership: the notion that everyone has exclusive control over their own body (Boaz, 2020). In addition, a central tenet of libertarianism is the idea of negative liberty, or freedom from the interference of others (Berlin, 2002). Jeske (1996) claims that forcing a pregnant woman to use her body in a particular way for the good of another (i.e., the fetus) fundamentally contradicts these libertarian ideals. When it comes to punishment in general, there is no one comprehensive libertarian orientation towards punishment, but it is common for libertarians to oppose the death penalty (e.g., Evans, 2013), and the current platform of the U.S. Libertarian Party advocates for a more lenient criminal justice system (Libertarian National Committee, n.d.).

However, despite venerating liberty in principle, previous research suggests that libertarians may be inconsistent when it comes to real-life application of these values and may make selective decisions about whose autonomy does and does not matter. Chalmers et al. (2023) examined self-proclaimed libertarians' attitudes towards reproductive freedom for both women and men and found that libertarianism was associated with support for men's reproductive autonomy, but opposition to women's. That is, libertarians tended to oppose women's abortion rights, while supporting men's right to both prevent women from having abortions (i.e., spousal veto) and withdraw financial support for unwanted children when a woman refuses to terminate the pregnancy (i.e., financial abortion).

While research is lacking on the association between libertarianism and punitiveness, the convergence of libertarianism's attitudes with other ideologies lead to potentially contradictory predictions in this realm. Given libertarianism's relationship with conservatism – e.g., in the United States, libertarians are more likely to vote Republican than Democratic (Smant, 2002), and most libertarians hold a favourable view of the Republican Party (Jones et al., 2013) – libertarians could be expected to also express more punitive attitudes. However, the group-oriented values endorsed by conservatives would seem to be at odds with libertarians'

emphasis on personal autonomy and liberty and, indeed, Iyer and colleagues (2012) found that libertarians endorsed values such as loyalty and authority to a much smaller degree than conservatives did. Libertarianism has also been found to correlate with social dominance orientation (SDO; Pratto et al., 1994): a preference for inequality and social hierarchies (e.g., Lauriola et al., 2015; Van Assche et al., 2019). Like conservatism, SDO has also been consistently associated with punitive attitudes in prior research (e.g., Sidanius et al., 1994; Capps, 2002). SDO may interact with group-level variables when it comes to punishment; Kimmelmeier (2005) found that, in a mock jury situation, individuals high in SDO granted more severe sentences to Black defendants, but less severe sentences to White defendants. From the perspective of maintaining existing hierarchies, this selective punitiveness makes sense, and could possibly be a strategy shared by libertarians.

Current Research

The present research aimed to conceptually replicate and extend previous research on the psychological factors underpinning the desire to punish pregnant women (Murphy et al., 2011). Past research had established links between hostile sexism and the desire to punish pregnant women for engaging in behaviors that are perceived to pose a risk to the fetus. Given the significant changes over the last decade in the legal status of women's reproductive autonomy, we aimed to investigate whether hostile sexism remains an important correlate of punitive attitudes to pregnant women. We also extended this work by shifting focus from the punishment of women for their behavior per se, which in general is not legally mandated, to a form of punishment that is currently legally mandated, namely the punishment of women for the outcome of their pregnancy, specifically miscarriage. Finally, we aimed to extend previous research by investigating the role of political orientation in this research, investigating the role of identification not only on the conservative-liberal dimension but also libertarian identification (Chalmers et al., 2023).

To measure political orientation, we chose to rely on single items assessing participants' self-identification. Relying on self-identification rather than scales of beliefs or attitudes is the standard approach for assessing political orientation. Miller (1994) claims that words like "conservative", "liberal" and "libertarian" are merely social constructs, and that their relationship to specific attitudes and policy positions changes over time and across different contexts. In addition, we chose to measure the three orientations (i.e., liberalism, conservatism, and libertarianism) separately, rather than using, for example, one left-right scale; this was partially necessary because libertarians exist on both the left and the right of the

political spectrum (Carlson, 2012), so we wanted to be able to capture these orientations separately from one another.

In Study 1, we tested these hypotheses in a sample recruited from Prolific, a widely used and validated crowdsourcing platform (Peer et al., 2017). In Study 2, we sought to replicate our findings in a sample obtained from social media users. In Study 3, we once again recruited from Prolific, but this time used filters to recruit equal numbers of self-identified liberals, conservatives, and libertarians. We hypothesised that libertarianism would be positively associated with support for punishing women for miscarriage (H1). We also predicted that libertarianism would be positively associated with conservatism, and with higher levels of both hostile sexism and benevolent sexism (H2). Additionally, we hypothesised that after adjusting for conservatism, the relationship between libertarianism and support for punishment would remain significant (H3). We predicted further that hostile and benevolent sexism would each be associated with support for punishment (H4), even when adjusting for political ideology (H5). These three studies – the first with a sample from Prolific, the second study replicating those results with a different convenience sample, and the third study replicating the results again with pre-registered hypotheses and a politically balanced sample – were conducted with very few changes made in order to obtain cumulative confidence in the findings.

Study 1

Method

Participants and Procedure

Participants were 306 residents of the United States aged 18 and above. They were recruited through the online platform Prolific (Peer et al., 2017); 10 participants were excluded for failing to complete the survey, leaving 296 responses for analysis. Of these, there were 129 women, 164 men, and three indicated their gender as "other." The mean age was 36.75 years old ($SD = 12.00$). Participants' ethnicity was not recorded. Participants were recruited online through the participant recruiting site, then redirected to the Qualtrics online survey. After giving their consent to participate, participants completed the measures detailed below in randomized order. Participants also completed measures related to perceptions of abortion and reproductive healthcare that were used for a separate study. Once these measures were complete, participants indicated their gender, age, religion, education level, and political persuasion (i.e., the extent to which they described themselves as liberal, conservative, and libertarian on seven-point scales ranging from 0 = *Not at all* to 6 = *Very much*). Participants were debriefed in text

upon completion of the study. Prior to data collection, this research was approved by the Psychology Research Ethics Committee at the University of Kent with the ethics committee approval code: 202,015,991,429,036,494 (Study 1 and Study 2 shared a joint ethics application).

Measures

Support for Punishment Participants completed a six-item scale constructed to measure attitudes towards punishing women for miscarriage. Participants were asked “to what extent do you agree that women should be subject to legal consequences if they miscarry after doing/experiencing the following during pregnancy” followed by the items “using drugs, tobacco, or alcohol,” “consuming foods not recommended during pregnancy (undercooked meat, raw shellfish, unpasteurised dairy, lots of caffeine, etc.),” “getting into a fight,” “attempting suicide,” “having an accident, e.g., falling down the stairs or crashing a vehicle,” and “having been denied a legal abortion, and are suspected of intentionally inducing miscarriage.” Participants rated their agreement with the statements on a seven-point Likert scale ranging from 1 = *Strongly disagree* to 7 = *Strongly agree*. Mean scores were calculated for each participant, with higher mean scores indicating greater support for punishment ($\alpha = .89$).

Ambivalent Sexism Participants completed the shortened version of the Ambivalent Sexism Inventory to measure benevolent and hostile sexism (Rollero et al., 2014). The shortened version of the scale used here comprised six items for benevolent sexism (“Many women have a quality of purity that few men possess”; $\alpha = .89$) and six items for hostile sexism (“When women lose to men in a fair competition, they typically complain about being discriminated against”; $\alpha = .94$). Participants rated their agreement with the statements on a six-point scale ranging from 1 = *Disagree strongly* to 6 = *Agree strongly*. Mean scores were calculated for each subscale, with higher mean scores indicating higher levels of benevolent sexism and hostile sexism.

Religiosity A four-item scale was used to measure three key elements of religiosity and overall religiosity (Sullivan, 2001): ritual (i.e., “How often do you attend religious services?”), consequence (i.e., “In general, how important are your religious or spiritual beliefs in your day to day life?”), experience (i.e., “When you have problems or difficulties in your work, family or personal life, how often do you seek spiritual comfort?”), and overall (i.e., “In general, would you say you are a religious person?”). Participants answered these questions on a five-point Likert scale containing ranging from 1 = *Not at all* to 5 = *A great deal*. Mean scores were calculated for each participant, with higher mean scores indicating higher levels of religiosity ($\alpha = .95$).

Results and Discussion

Bivariate correlations were first calculated to examine the interrelations between variables (Table 1). Consistent with our predictions, support for punishment was positively associated with libertarian identification, hostile sexism, and conservative identification. It was also positively associated with benevolent sexism and religiosity, and negatively associated with liberal identification. For additional correlational analyses involving the associations between libertarian identification and each of the individual support for punishment items for Studies 1–3, see Supplementary Materials (https://osf.io/zmt83/?view_only=244db30fe0444baaa6b43dad7c9d56d).

A hierarchical multiple regression was conducted to determine whether support for punishment varied as a function of support for libertarian identification after controlling for liberal identification, conservative identification, gender, religiosity, benevolent sexism, and hostile sexism (Table 2). Variables were entered in three steps. In step 1, liberal identification, conservative identification, religiosity, and gender were the independent variables. In step 2, libertarian identification was entered into the step 1 equation to examine whether it explained variance above the demographic and political variables. In step 3, hostile and benevolent sexism were added to examine whether any effect of libertarian

Table 1 Bivariate Correlations and Descriptive Statistics (Study 1)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Support for Punishment	3.20	1.55						
2. Benevolent Sexism	3.44	1.31	.58***					
3. Hostile Sexism	2.98	1.49	.64***	.69***				
4. Liberal ID	3.61	1.88	-.16**	-.07	-.23***			
5. Conservative ID	2.04	1.79	.37***	.31***	.48***	-.65***		
6. Libertarian ID	2.40	1.84	.37***	.34***	.44***	-.07	.26***	
7. Religiosity	2.73	1.45	.57***	.55***	.56***	-.11	.36***	.32***

Note. *N* = 296. ID = Identification. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2 Summary of Regression Analyses for Support for Punishment (Study 1)

Predictor	Support for Punishment		
	β	<i>t</i>	<i>sr</i> ²
Step 1 $\Delta R^2 = .38^{***}$			
Liberal ID	.03	.51	.00
Conservative ID	.18	2.65**	.02
Gender	-.16	-3.29**	.02
Religiosity	.49	9.77***	.21
Step 2 $\Delta R^2 = .02^{**}$			
Liberal ID	.01	.11	.00
Conservative ID	.14	2.02*	.01
Gender	-.14	-2.88**	.02
Religiosity	.46	8.99***	.17
Libertarian ID	.15	3.00**	.02
Step 3 $\Delta R^2 = .09^{***}$			
Liberal ID	-.01	-.22	.00
Conservative ID	.04	.66	.00
Gender	-.04	-.89	.00
Religiosity	.27	5.02***	.04
Libertarian ID	.06	1.26	.00
Benevolent Sexism	.18	2.89**	.01
Hostile Sexism	.30	4.34***	.03

Note. *n* = 293. ID = Identification. **p* < .05. ***p* < .01. ****p* < .001.

identification might be explained by sexism. Due to the inclusion of gender as a variable of interest, participants who indicated their gender as “other” were excluded from this analysis, resulting in 293 participants.

In the first step, the overall model was significant, $F(4, 286) = 44.22$, $p < .001$ (Step 1), and conservative identification was a significant positive predictor of support for punishment. In the second step, the overall model remained significant, $F(5, 285) = 38.16$, $p < .001$ (Step 2), and libertarian identification was a significant positive predictor of support for punishment. In the third step, the overall model was significant, $F(7, 283) = 39.41$, $p < .001$ (Step 3), and both hostile and benevolent sexism were significant positive predictors of support for punishment. Once these two variables were added to the model, libertarian identification and conservative identification were no longer significant predictors of punishment.

Based on the regression results, mediation analyses were carried out to test whether the relationship between libertarian identification and support for punishment was mediated by hostile sexism. We used Hayes’ PROCESS macro (Version 3.5, Model 4) for SPSS (2017), and tested the significance of indirect effects using bootstrapping procedures. Unstandardized indirect effects were computed for each of 5000 bootstrapped samples, with 95% confidence intervals. Liberal identification, conservative

identification, benevolent sexism, gender, and religiosity were also added to the analyses as covariates. Again, participants who indicated their gender as “other” were excluded from analysis, leaving 293 participants. As predicted, hostile sexism mediated the relationship between libertarian identification and support for punishment, indirect $B = .04$, $SE = .02$, [.01, .08] (see Fig. 1). In contrast, the indirect path from libertarianism to support for punishment through BS (adjusting for HS and the other covariates) was not significant in this or any of our studies.

Consistent with our predictions, these findings demonstrated that libertarians may not be as straightforwardly against punishment as the philosophical principles underlying this political identification would suggest. Libertarian self-identification was positively associated with support for punishing women for miscarriage, as were conservatism and both hostile and benevolent sexism. Libertarian identification was still associated with support for punishment after controlling for conservatism, but not after controlling for hostile and benevolent sexism, and the relationship between libertarian identification and support for punishment was mediated by hostile sexism. These results demonstrate that the emphasis on liberty and theoretical aversion to punishment among self-identified libertarians does not necessarily extend to pregnant women, and that this may be explained by libertarians’ hostile sexism. In Study 2, we attempted to replicate these findings in a larger sample recruited from social media.

Study 2

Method

Participants and Procedure

Participants were 853 residents of the United States aged 18 and above recruited through social media; 273 participants were excluded for failing to complete the survey, leaving 580 responses for analysis. Of these, there were 363

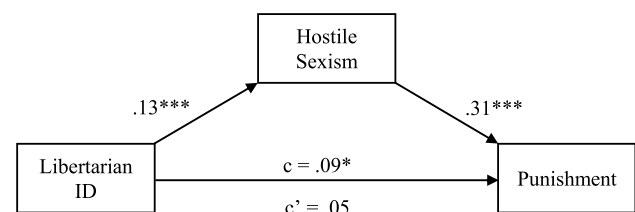


Fig. 1 Standardized Regression Coefficients for the Relationship Between Libertarian Identification and Support for Punishment as Mediated by Hostile Sexism (Study 1). Note. **p* < .05. ***p* < .01. ****p* < .001

Table 3 Bivariate Correlations and Descriptive Statistics (Study 2)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Support for Punishment	1.95	1.17						
2. Benevolent Sexism	2.27	.96	.37***					
3. Hostile Sexism	1.80	.97	.49***	.53***				
4. Liberal ID	4.42	1.76	-.35***	-.32***	-.50***			
5. Conservative ID	1.12	1.48	.46***	.41***	.63***	-.62***		
6. Libertarian ID	1.71	1.73	.15***	.16***	.35***	-.28***	.39***	
7. Religiosity	1.84	1.20	.32***	.39***	.24***	-.33***	.43***	.11**

Note. *N* = 580. **p* < .05. ***p* < .01. ****p* < .001.

women, 188 men, and 29 indicated their gender as “other.” The mean age was 30.51 years (*SD* = 12.77). Participants’ ethnicity was not recorded. Participants were recruited by posting links to the Qualtrics survey on Facebook and Instagram, as well as four Reddit boards: three related to abortion (r/prolife, r/prochoice, and r/abortiondebate), and one general board for recruiting research participants (r/samplesize). This study then followed the same procedure as Study 1. Prior to data collection, this research was approved by the Psychology Research Ethics Committee at the University of Kent with the ethics committee approval code: 202,015,991,429,036,494 (Study 1 and Study 2 shared a joint ethics application).

Measures

Participants completed the same measures of support for punishment ($\alpha = .88$), ambivalent sexism ($\alpha = .90$ for hostile sexism, $\alpha = .76$ for benevolent sexism), and religiosity ($\alpha = .94$) used in Study 1. Participants also completed the same demographic measures as Study 1.

Results and Discussion

As in Study 1, bivariate correlations were first calculated to examine the interrelations between variables (Table 3). Consistent with our predictions, support for punishment was positively associated with libertarian identification, hostile sexism, and conservative identification. It was also positively associated with benevolent sexism and religiosity, and negatively associated with liberal identification.

Once again, a hierarchical multiple regression was conducted to determine whether support for punishment varied as a function of libertarian identification after controlling for liberal identification, conservative identification, gender, religiosity, benevolent sexism, and hostile sexism (Table 4). Variables were entered in three steps. In Step 1, liberal identification, conservative identification, religiosity, and gender were the independent variables. In Step 2, libertarian identification was entered into the Step 1 equation to examine

whether it explained variance above the demographic and political variables. In Step 3, hostile and benevolent sexism were added to examine whether any effect of libertarian identification might be explained by sexism. Due to the inclusion of gender as a variable of interest, participants who indicated their gender as “other” were excluded from this analysis, resulting in 551 participants.

In the first step, the overall model was significant, $F(4, 543) = 40.89, p < .001$ (Step 1), and conservative identification was a significant positive predictor of support for punishment. In the second step, the overall model remained significant, $F(5, 542) = 32.81, p < .001$ (Step 2), but libertarian identification was not a significant negative predictor of support for punishment. In the third step, the overall model

Table 4 Summary of Regression Analyses, Support for Punishment (Study 2)

Predictor	Support for Punishment		
	β	<i>t</i>	<i>sr</i> ²
Step 1	$\Delta R^2 = .23***$		
Liberal ID	-.10	-2.03*	.01
Conservative ID	.32	6.02***	.05
Gender	-.05	-1.28	.00
Religiosity	.14	3.31**	.02
Step 2	$\Delta R^2 = .00$		
Liberal ID	-.11	-2.08*	.01
Conservative ID	.33	6.01***	.05
Gender	-.05	-1.30	.00
Religiosity	.14	3.24**	.01
Libertarian ID	-.03	-.79	.00
Step 3	$\Delta R^2 = .06***$		
Liberal ID	-.05	-.93	.00
Conservative ID	.19	3.27**	.01
Gender	-.01	-.29	.00
Religiosity	.13	3.04**	.01
Libertarian ID	-.06	-1.57	.00
Benevolent Sexism	.08	1.73	.00
Hostile Sexism	.28	5.28***	.04

n = 548. ID = Identification. **p* < .05. ***p* < .01. ****p* < .001.

was significant, $F(7, 540) = 31.59, p < .001$ (Step 3), and hostile sexism was a significant positive predictor of support for punishment.

Once again, mediation analyses were carried out to test whether the relationship between libertarian identification and support for punishment was mediated by hostile sexism using the same approach as Study 1. Again, participants who indicated their gender as “other” were excluded from analysis, leaving 551 participants. As predicted, hostile sexism mediated the association between libertarian identification and support for punishment, indirect $B = .02, SE = .01, [.01, .04]$ (see Fig. 2).

This study sought to replicate the results of Study 1 in a larger sample recruited from social media. Even with the more liberal skew of this study’s participants, our findings again provided support for the idea that libertarians do not straightforwardly endorse liberty and eschew punishment when it comes to pregnant women. Like Study 1, libertarian self-identification was positively associated with support for punishing women for miscarriage, as were conservatism and both hostile and benevolent sexism. However, unlike Study 1, libertarian identification was no longer associated with support for punishment after controlling for conservatism; once again, though, the relationship between libertarian identification and support for punishment was mediated by hostile sexism. While not quite as clear-cut as Study 1, the results of this study further suggest that freedom from punishment for pregnant women is not a priority for libertarians due to their high levels of hostile sexism. In Study 3, we attempted to replicate these findings in a politically balanced sample from Prolific, while also preregistering our hypotheses on the Open Science Framework (OSF; osf.io/whk37). A limitation to note for both Study 1 and 2 is the potential lack of familiarity with the term “libertarian.” In a Pew Research survey on American libertarianism (Kiley, 2014), researchers included an understanding check for the definition of libertarian where participants were asked for the definition of “someone whose political views emphasize individual freedom by limiting the role of government” and given five choices: “libertarian” “progressive,”

“authoritarian,” “Unitarian” and “communist.” In Study 3, we included this same understanding check to test whether results differed based on participants’ understanding of the term “libertarian.”

Study 3

Method

Participants and Procedure

Participants were 308 residents of the United States, aged 18 and above. They were recruited through the online platform Prolific (Peer et al., 2017); 150 were women, 148 were men, nine indicated their gender as “other,” and one did not indicate their gender. The mean age was 40.31 years ($SD = 15.66$), and 73.7% of participants were White. A filter was used on Prolific to recruit equal numbers of self-identified liberals, conservatives, and libertarians (i.e., 100 of each). As in Study 1, participants were recruited online through the participant recruiting site, then redirected to the Qualtrics online survey. This study then followed the same procedure as Study 1 and Study 2. Prior to data collection, this research was approved by the Psychology Research Ethics Committee at the University of Kent with the ethics committee approval code: 202,316,863,036,668,571.

Measures

Participants completed the same measures of punishment ($\alpha = .85$), ambivalent sexism ($\alpha = .92$ for hostile sexism, $\alpha = .82$ for benevolent sexism), and religiosity ($\alpha = .93$) used in Study 1 and Study 2. Participants also completed the demographic measures from Study 1 and Study 2; however, sexual orientation, racial identity and ethnicity were additionally included in the demographics section. A single item was also used to assess participants’ understanding of libertarianism; for results with this understanding check taken into account, see Supplementary Materials (https://osf.io/zmt83/?view_only=244db30fe0444baaa6b43dad7c9d56d).

Results and Discussion

As in Studies 1 and 2, bivariate correlations were first calculated to examine the interrelations between variables (Table 5). Consistent with our predictions, support for punishment was positively associated with libertarian identification, hostile sexism, and conservative identification. It was also positively associated with benevolent sexism and religiosity, and negatively associated with liberal identification.

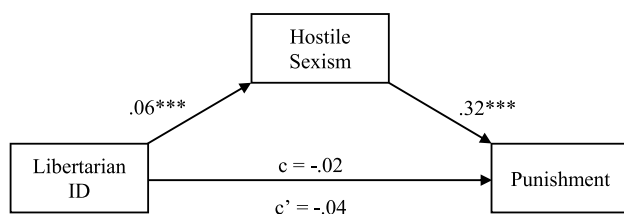


Fig. 2 Standardized Regression Coefficients for the Relationship Between Libertarian Identification and Support for Punishment as Mediated by Hostile Sexism (Study 2). Note. * $p < .05$. ** $p < .01$. *** $p < .001$

Table 5 Bivariate Correlations and Descriptive Statistics (Study 3)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Support for Punishment	2.73	1.35						
2. Benevolent Sexism	3.14	1.13	.46***					
3. Hostile Sexism	2.62	1.30	.48***	.40***				
4. Liberal ID	2.80	2.13	-.42***	-.32***	-.46***			
5. Conservative ID	2.33	1.98	.50***	.36***	.50***	-.70***		
6. Libertarian ID	1.82	1.72	.12*	.10	.13*	-.05	.19***	
7. Religiosity	2.46	1.31	.35***	.29***	.15*	-.32***	.41***	.06

Note. *N* = 307. ID = Identification. **p* < .05. ***p* < .01. ****p* < .001.

Once again, a hierarchical multiple regression was conducted to determine whether support for punishment varied as a function of support for libertarian identification after controlling for liberal identification, conservative identification, gender, religiosity, benevolent sexism, and hostile sexism (Table 6). Variables were entered in three steps. In Step 1, liberal identification, conservative identification, religiosity, and gender were the independent variables. In Step 2, libertarian identification was entered into the Step 1 equation to examine whether it explained variance above the demographic and political variables. In Step 3, hostile and benevolent sexism were also added to examine whether any effect of libertarian identification might be explained by sexism. Due to the inclusion of gender as a variable of interest,

Table 6 Summary of Regression Analyses, Support for Punishment (Study 3)

Predictor	Support for Punishment		
	β	<i>t</i>	<i>sr</i> ²
Step 1			
	$\Delta R^2 = .30^{***}$		
Liberal ID	-.17	-2.41*	.01
Conservative ID	.30	4.06***	.04
Gender	-.11	-2.13*	.01
Religiosity	.18	3.32**	.03
Step 2			
	$\Delta R^2 = .00$		
Liberal ID	-.17	-2.41*	.01
Conservative ID	.30	3.94***	.04
Gender	-.11	-2.11*	.01
Religiosity	.18	3.32**	.03
Libertarian ID	.01	.16	.00
Step 3			
	$\Delta R^2 = .10^{***}$		
Liberal ID	-.10	-1.41	.00
Conservative ID	.17	2.29*	.01
Gender	-.01	-.18	.00
Religiosity	.15	2.89**	.02
Libertarian ID	-.01	-.12	.00
Benevolent Sexism	.23	4.44***	.04
Hostile Sexism	.24	4.16***	.04

Note. *n* = 297. ID = Identification. **p* < .05. ***p* < .01. ****p* < .001.

participants who indicated their gender as “other” or did not include their gender were excluded from this analysis, resulting in 297 participants.

In the first step, the overall model was significant, $F(4, 292) = 31.12$, $p < .001$ (Step 1), and conservative identification was a significant positive predictor of support for punishment. In the second step, the overall model remained significant, $F(5, 291) = 24.82$, $p < .001$ (Step 2), but libertarian identification was not a significant negative predictor of support for punishment. In the third step, the overall model was significant, $F(7, 289) = 27.48$, $p < .001$ (Step 3), and hostile sexism was a significant positive predictor of support for punishment.

Once again, mediation analyses were carried out to test whether the relationship between libertarian identification and support for punishment was mediated by hostile sexism using the same approach as Study 1 and 2. Again, participants who indicated their gender as “other” were excluded from analysis, leaving 297 participants. As seen in Fig. 3, inconsistent with the findings from Study 1 and 2, hostile sexism did not mediate the relationship between libertarian identification and support for punishment, indirect $B = .01$, $SE = .01$, $[-.01, .03]$.

The aim of third study was to produce a pre-registered replication of Study 1 and Study 2 in a politically balanced sample. Consistent with the previous two studies, libertarian self-identification was positively associated with support for punishing women for miscarriage, as were conservatism and

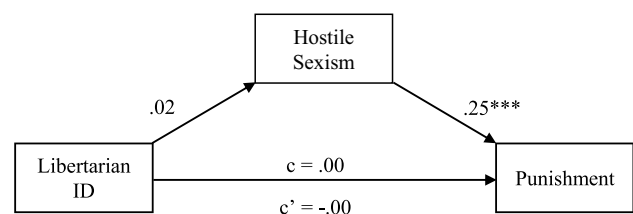


Fig. 3 Standardized Regression Coefficients for the Relationship Between Libertarian Identification and Support for Punishment as Mediated by Hostile Sexism (Study 3). Note. **p* < .05. ***p* < .01. ****p* < .001

both hostile and benevolent sexism. However, libertarian identification was no longer associated with support for punishment after controlling for conservatism, and, unlike the first two studies, the association between libertarian identification and support for punishment was not mediated by hostile sexism. While these results diverge somewhat from the first two studies, there is still some evidence of libertarian's support for punishing women for miscarriage; however, in this case, the link did not survive after adjusting for conservatism. We also included an understanding check based on Kiley (2014), and results were not substantially different when this understanding check was taken into account, suggesting that this limitation was not impactful in Study 1 and 2 (see Supplementary Materials, https://osf.io/zmt83/?view_only=244db30fe0444baaa6b43dad7c9d56d).

General Discussion

Across three studies, we conceptually replicated and extended Murphy et al.'s (2011) previous research on the psychological underpinnings of the desire to punish pregnant women. Specifically, we investigated whether hostile sexism remained a correlate of punitive attitudes to pregnant women, while also examining the role of political orientation and shifting our focus from abstract attitudes to concrete policies that exist to punish women for miscarriage. In all three studies, Murphy et al.'s findings were replicated; even after controlling for political orientation, hostile sexism remained a significant positive predictor of support for punishing women. As expected, conservative and libertarian self-identification were positively associated with support for punishment at the zero-order level (while liberal self-identification was negatively associated) across all three studies. In multiple regressions adjusting for sexism and demographic variables, conservatism remained significantly positively related to support for punishment in Study 2 and 3, but not in Study 1. Libertarian identification was not a significant predictor of support for punishment in any of the studies after adjusting for sexism and demographic variables; however, our theoretical model suggests that this might be attributable to hostile sexism playing a more proximal role (cf. Chalmers et al., 2023). With this in mind, we conducted mediation analyses and found significant indirect paths from libertarian identification through hostile sexism in two of the three studies.

This finding, that hostile sexism proximally and independently predicts support for the legal punishment of women who experience miscarriages, at once conceptually replicates and extends previous research. Specifically, Murphy et al. (2011) found that hostile sexism was associated with support, in the abstract, for the punishment of women who do not follow proscriptive lifestyle advice during pregnancy.

In the present studies, participants who were high in hostile sexism supported punishment of women for miscarriages specifically, in keeping with actual and proposed legal sanctions. This willingness to punish women for their choices and outcomes during pregnancy also underscores the connection between hostile sexism and the desire to exert control over women's reproductive capacity. Much like the findings from Petterson and Sutton (2018) and Chalmers et al. (2023) – where participants who endorsed hostile sexism preferred whichever abortion policies afforded men the most control – the ability to punish pregnant women is arguably another example of exerting control over them.

In contrast, our findings deviated somewhat from Murphy et al.'s (2011) when it came to the role of benevolent sexism. While these authors found that benevolent sexism was associated with the endorsement of pregnancy proscriptions but not with punitive attitudes towards women who flout them, benevolent sexism was positively associated with support for punishment at the zero-order level in all three of our studies. Further, in two of the three studies, this association remained significant after controlling for demographics, political orientation, and hostile sexism. It is possible that when explicitly examining scenarios where a miscarriage has occurred, rather than merely police behaviours that may increase the possibility of a miscarriage or other negative outcome (as in Murphy et al.), those high in benevolent sexism are more willing to resort to punishment for the woman involved.

Our findings for political orientation extend the investigation of Murphy et al. (2011), and are not only consistent with previous research, but also with real world law and policy in the United States. We found that conservatives supported punishing women for miscarriage, which is consistent with their tendency to be more punitive than liberals in general, in part because of their greater emphasis on the “binding” moral foundations which emphasise duty, tradition, and interdependence (Atari et al., 2023; Silver & Silver, 2017). The more specific desire to punish women for miscarriages which may be related to undesirable behavior during pregnancy could be seen as an example of “expressive” punishment: a severe punishment inflicted with the aim of protecting the existing social order against moral transgressions (King & Maruna, 2009). Most laws in the US imposing punishment on women for miscarriage are passed by Republican lawmakers; one example is Virginia state delegate John Cosgrove, a Republican who attempted to pass a bill in the state requiring women to report the death of their fetus to police within 12 h of miscarrying lest they be charged with a misdemeanor (Ratliff, 2009).

While conservatives' positions on many societal issues are well documented and understood, as increasingly is their stance on reproductive policy (Osborne et al., 2022), much less is known about libertarians' positions. Libertarianism is still a new area of research, and despite their small numbers

relative to traditional liberals and conservatives, libertarians are gaining a foothold in the United States in recent years; for example, in research by Kiley (2014), 11% of Americans described themselves as libertarians, and in 2016 Rand Paul put the ideology on the national stage when he ran for United States president as a Republican libertarian (Weinger, 2013). Libertarians' relative support (apparent in zero-order correlations) for punishing women for miscarriage would seem to not only contradict their emphasis on individual liberty as an abstract tenet, but also their stated belief in freedom from government intervention (Boaz, 2020). While our results align with Chalmers et al.'s (2023) previous research suggesting that libertarians do not support reproductive freedom for women, they also go a step further in highlighting libertarians' support for state-enforced consequences for women who experience negative outcomes during pregnancy. This apparently inconsistent picture provides further evidence for the selective application of libertarian principles.

Limitations and Future Research Directions

A limitation of this research was that only participants from the United States were sampled. Abortion-related attitudes differ between the US and the rest of the world, not just in the degree of support for or opposition to abortion rights but also in the relationships these attitudes have with other ideologies. According to a survey from the Pew Research Center, people on the left side of the political spectrum are more likely to support legal abortion compared to those on the right side in most countries, but in the United States this difference is particularly strong. 91% of liberals in the US say that abortion should be legal in all or most cases, while only 29% of conservatives say the same; this left-right difference of 62% points indicates a far more pronounced political divide than the 10-percentage point difference between liberals and conservatives in the United Kingdom (Fetterolf & Clancy, 2023). However, Murphy et al.'s (2011) research was conducted with British participants, suggesting that the pattern of findings related to hostile sexism are consistent between the US and the UK. In addition, while many libertarian political parties in Europe exist on the left side of the political spectrum (Carlson, 2012), American libertarians tend to be conservative (Cooper, 2021), suggesting results related to libertarianism may have differed had this research been conducted outside of the United States. Another limitation to note is that Study 3 was conducted after the U.S. supreme court reversed *Roe vs. Wade* – the landmark Supreme Court ruling which had protected a woman's constitutional right to an abortion since 1973 (Totenberg & McCammon, 2022). As a result of this watershed moment in the reproductive rights landscape, the debate around issues of pregnancy, miscarriage and abortion was likely to have been particularly tumultuous and polarised, particularly in the United States.

Another potential limitation to note with regards to sampling is the recruitment of participants from Study 2 from subreddits dedicated to the abortion debate. These knowledgeable, invested participants may be seen as opinion leaders in online discourse and it was useful therefore to examine their attitudes. However, given the relatively greater knowledge about reproductive issues held by members of subreddits dedicated to discussing these topics, these participants may be biased and not reflect wider public beliefs and opinions. However, we attempted to mitigate our sampling limitations somewhat and get a more diverse range of opinions by recruiting a politically balanced sample from Prolific in Study 3.

Future research should attempt to address these limitations, while also delving further into how ideologies such as libertarianism, conservatism, and sexism impact attitudes toward pregnancy, reproduction and child-rearing. Practices such as surrogacy are likely to be strongly implicated in this regard, particularly as commercial surrogacy combines the economic realm with bodily autonomy, gender politics, and childbirth. In addition, while mothers have always been scrutinized, the advent of social media and other online forums has led to greater surveillance of mothers, resulting in a particularly intense culture of judgement and shaming (Bailey, 2023) – research into how ideologies such as political orientation and sexism play into this culture would be greatly beneficial.

Practice Implications

In the aftermath of *Roe vs. Wade*'s reversal, we are witnessing a tumultuous time for women's reproductive rights, particularly in the United States. The finding that support for punishing women for miscarriage is intertwined with ideological attitudes, including political ideologies, has important implications for both policy makers and voters, particularly given the salience of abortion rights when it comes to deciding elections (Ax, 2023). Knowing that restrictions on reproductive autonomy for political partisans may go beyond abortion and result in punishing women for their miscarriages is important information for voters to consider. This is especially important since 25% of pregnancies end in miscarriage, placing millions of women, in principle, at legal risk from such policies.

Even when women who suffer miscarriages do not find themselves at the wrong end of the law individually, these policies likely contribute to their experience of guilt, isolation, and shame (Hand, 2013) and trauma (Engelhard, 2004). Uncovering the ideological roots of the attitudes associated with blaming women for their miscarriages and desiring to punish them can help clarify where further education is needed to rectify these attitudes and prevent miscarrying women from experiencing further trauma. These findings also have implications for activists who are campaigning to protect women's

reproductive rights, as emphasizing how ideologies such as sexism, conservatism and libertarianism encroach on women's reproductive autonomy in this specific realm can be a persuasive messaging tool they can use to move their cause forward.

Conclusion

Attitudes toward pregnancy and reproduction are deeply intertwined with other ideologies – in some ways that are obvious and some ways that are not – and support for punishing women for miscarriage is no exception. Hostile sexism remains relevant to support for punishment even after controlling for political identification, but conservatism also plays an important role, and libertarianism does not appear to provide an antidote to these attitudes despite its emphasis on individual rights and freedoms. As more and more policies emerge to punish women for miscarriage and restrict their reproductive choices in other ways, it is more important than ever to investigate what factors are driving these attitudes and policies.

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Data Availability The data that support the findings of this study are openly available at the Open Science Framework (OSF) at https://osf.io/zmt83/?view_only=244db30fe0444baaa6b43dadc7c9d56d along with additional supplementary materials.

Compliance with Ethical Standards

Ethical Approval This research involved human participants, and all three studies were conducted with the approval of the Psychology Research Ethics Committee at the University of Kent. Ethics committee approval code: 202015991429036494 (Study 1 and Study 2); 202316863036668571 (Study 3).

Informed Consent Informed consent was obtained from all participants prior to completing each survey.

Conflict of Interest The authors do not have any potential conflicts of interest to disclose.

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