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Attitudes Toward Prostitution in Norway, Spain, and Germany: Association With the Legal Context and Susceptibility to Persuasion

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ABSTRACT

The social and legal treatment of prostitution varies between countries. We examined attitudes toward prostitution (ATP) and their susceptibility to persuasion in three countries: Norway, where prostitution is illegal; Spain, where prostitution is not explicitly regulated in the law; and Germany, where prostitution is legal. Participants (total $N = 579$) read arguments in favor of either legalization or abolition of prostitution or no arguments. Then they reported their ATP, judged the consequences of abolishing prostitution and completed measures of feminism, political orientation and sociosexuality. Results showed that, as hypothesized, ATP scores (1) reflected the countries' legislation, being most positive in Germany and least positive in Norway; (2) were affected by arguments only in Spain, where the legal situation is ambiguous; and (3) were meaningfully correlated with other attitudes across countries. These findings highlight the association of legal frameworks with attitudes, suggesting that national legislation can shape social norms and perceptions of prostitution. Additionally, the varying susceptibility to persuasive messages across different legal contexts underscores the role of legal ambiguity in shaping openness to attitudinal change.

1 | Introduction

Prostitution/sex work¹ is an explosive topic that is much discussed (for a review, see Skilbrei 2019). The way society deals with prostitution varies greatly in Europe. Abolitionist approaches compete with regulatory-liberal approaches (Jonsson and Jakobsson 2017). The abolitionist approach views all sex work as violence against women, perpetuating gender inequality and violating women's rights (Méndez-Juez, García-Santamaría, and Pérez-Castaños 2023). From this perspective, prostitution is closely linked to trafficking for sexual exploitation, especially in the case of migrant women (Meneses-Falcón and Rúa-Vieites 2023). This stance advocates for penalizing clients and

facilitators, such as pimps and business owners, but not the women who engage in prostitution, who are always considered victims of a patriarchal system that oppresses them. In contrast, the regulatory or pro-legalization perspective views sex work as a job like any other that should be regulated to provide greater rights to the women who engage in it, in addition to combating human trafficking. It supports the free decision of women and their sexual agency to engage in sex work, something that abolitionist viewpoints deny can exist (Meneses-Falcón, Rúa-Vieites, and García-Vázquez 2024).

Sex work politics can develop into a moral crusade for one position or another and lead to an emotionally charged representation

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Summary

- Social and legal treatment of prostitution varies between countries.
- Attitudes toward prostitution in Norway, Spain and Germany reflected the countries' legislation, being most positive in Germany and least positive in Norway.
- Susceptibility to persuasion in favor of either legalization or abolition of prostitution was also related to legal frameworks.

of one's own point of view (Méndez-Juez, García-Santamaría, and Pérez-Castaños 2023). The issue of prostitution has a polarizing effect, which is why various groups and movements are publicly expressing their opinions on prostitution. In this article we assess and compare attitudes toward prostitution (ATP) in Norway, Spain, and Germany, three European countries with very different prostitution laws. In addition, we examine how the persuasiveness of arguments in favor of either abolition or legalization of prostitution may depend on the legal situation in each country.

Broadly speaking, prostitution can be defined as “the exchange of sexual access to a person's body for something of value, usually money or drugs” (Monto 2004, 161). Although we are aware that there is not only female prostitution, we focus on this type of prostitution in this work, as it is the most widespread and best known form of sex work. ATP and sex workers and their relations to feminist attitudes, acceptance of rape myths, the legal framework, as well as underlying motives and attitudes of consumers of sexual services have been studied by various researchers (e.g., Digidiki and Baka 2017; Escot et al. 2022; Hansen and Johansson 2023; Kotsadam and Jakobsson 2011; Levin and Peled 2011; Menaker and Franklin 2018; Valor-Segura, Expósito, and Moya 2011). Comparisons of ATP between countries that have different laws on prostitution have scarcely been studied (Immordino and Russo 2015; Jonsson and Jakobsson 2017; but see also Escot et al. 2022, for an experimental approach using hypothetical legal frameworks). Immordino and Russo (2015) observed an alignment of people's positions about legalizing or abolishing prostitution² with the national legislation about prostitution in different countries. Jonsson and Jakobsson (2017) considered legislation in eight European countries in 2014. They established three groups: one in which both brothel owning and purchasing sex were criminalized (e.g., Norway); one in which both aspects were regulated and legalized (e.g., Germany); and one where brothel owning was criminalized but the purchase of sex was legal (e.g., Spain). Their results showed that there were differences in ATP depending on the legal situation. Citizens of those countries where the purchase of sex was criminalized were less tolerant toward prostitution than were citizens of countries where prostitution was legal.

However, in these two studies the conclusions were obtained from very few items. Immordino and Russo (2015) relied on a single item (“Do you consider prostitution justifiable?”) from the World Values Survey; Jonsson and Jakobsson (2017) used two items: “Is it according to you morally justified or morally wrong

to pay for sex?” and “Do you think it should be prohibited to buy sex?”

Therefore, we found it necessary to continue studying to what extent the existence of different laws is really associated with citizens' ATP by using a broader measure of attitudes that addresses a wider range of aspects than did previous measures. In the present research, we studied ATP with a new scale in three countries that represent three different legislative positions: Norway, Spain, and Germany. To show why it is expedient to compare ATP in these three countries, we summarize the history of prostitution in each country and describe the current legal situation.

1.1 | Norway, Spain, and Germany: Differences in Prostitution Legislation, but Many Similarities

Sexual relations outside marriage, including prostitution, have long been illegal in Norway's history. Prostitution was recognized as a public health problem that required intervention by medical authorities and the police (Stenvoll 2002). Pimping has been illegal in Norway since 1995, but often not prosecuted as it is difficult to detect and prove. In 2001, a law was passed banning the provision of sexual services and another law prosecuting sex workers for homelessness (Skilbrei 2001). The current law regulating prostitution has been in force since January 2009 and is part of the General Civil Penal Code. The exact wording of the law can be found in Appendix S1A (see *Almindelig borgerlig Straffelov, Lovdata n.d.*). In summary, pimping is a criminal offense and prostitution is illegal; sex workers themselves are not penalized, but customers who use sexual services are.

In Spain, laws regarding prostitution before 1936 alternated between abolishing and then regulating it. The regulation involved registration and regular medical examinations of the sex workers. From the mid-1960s, policy in Spain under the Franco regime was overwhelmingly in favor of the abolition of prostitution. In 1995, prostitution was again largely decriminalized (Guereña 2008). Current laws regulating some acts related to prostitution have been in force since November 1999 and are contained in the criminal code. The exact wording can be found in Appendix S1A (Curiel 2008, 21). Overall, it can be said that there is not one prostitution law that regulates all aspects. Instead, individual sub-areas of prostitution are regulated by law. In summary, prostitution in Spain is still in a “legal limbo.” The law only stipulates that cases of restriction of sexual freedom, intimidation, abuse of authority, and other types of incitement and pimping are punishable. There is also an increase in penalties for those who exploit minors and disabled people by forcing them into prostitution.

Prostitution has not been prohibited in Germany since 1927, but according to case law it was considered immoral and harmful to society (Czarnecki et al. 2014). Under National Socialism, prostitution was linked, among other things, to police regulations that made it possible to instrumentalize it for state purposes. Prostitution had been banned in East Germany since 1968 but continued to be instrumentalized by State Intelligence to obtain information. In West Germany, on the other hand, prostitution was allowed but regulated. It was not recognized as gainful

employment and did not enjoy legal protection (Falck 2010; Gless 1999). The current legal situation regarding prostitution in Germany is clearly regulated by the Prostitution Act (ProstG), which came into force in January 2002. The exact wording of the law can be found in Appendix S1A (Czarnecki et al. 2014, 45). In summary, according to the law, practicing prostitution and using such services are legal in Germany. Exploitative pimping and the use of sexual services by minors up to the age of 17 are punishable. Brothel operators only have limited claims against sex workers with regard to the agreed place of work and agreed working hours. The sex workers are free to choose clients and determine what kind of sexual services they provide.

Based on the respective laws, it is clear that prostitution is illegal in Norway, ambiguously regulated in Spain, and legal in Germany. Although a country's legal position regarding prostitution is likely to influence public opinion, it is probably not shared by all citizens, and public debates about prostitution keep coming up (Méndez-Juez, García-Santamaría, and Pérez-Castaños 2023). Also, research on other issues has shown that legislation and public opinion mutually influence each other: When public opinion changes, this may lead to corresponding changes in the law, and when the law changes, this is likely to shape public opinion accordingly (Slenders, Sieben, and Verbakel 2014).

The selection of cases for this comparative study has been based not only on their differences in prostitution legislation but also on their similarities in important socio-cultural aspects. Norway, Spain, and Germany, although they differ in legislation regarding prostitution, are countries that share many similarities in various aspects. All three are European countries, integrated into the European Economic Area (EEA) and members of the Schengen Area (European Commission 2024), allowing them access to the single European market and also guaranteeing the free movement of people. All three countries rank among the highest in the world in terms of human development, as measured by the HDI. Norway often ranks first or among the top, while Spain and Germany also excel in terms of well-being, education, and life expectancy (United Nations Development Programme 2020). Norway, Spain, and Germany all have extensive welfare systems, including access to free education, universal healthcare, and social security services to ensure the well-being of their citizens (OECD 2024a). While with different focuses, all three countries have highly developed economies. All three countries have well-established democracies, with high levels of citizen participation, respect for human rights, and stable governance structures (EIU Report 2023). Spain, Norway, and Germany have seen significant increases in immigration over the past decades. This immigration has contributed to the cultural and ethnic diversity in these countries, making them more multicultural, which presents both opportunities and challenges in terms of integration and social cohesion (Eurostat 2023). All three countries have high-quality education systems and promote universal access to education. Norway, Germany, and Spain have prestigious universities and have invested in research and technological development (OECD 2024b).

In summary, Norway, Spain, and Germany have relevant differences in their legislation regarding prostitution. In other

respects, they share many similarities, notably in terms of their belonging to Europe, human development, advanced economies, and political stability. For both reasons, a comparative study of ATP between the three countries seemed expedient.

1.2 | Assessing ATP

Studying public opinion and acceptance of prostitution is important because, in a democratic society, public opinion and social policy are closely linked (Burstein 2003). There have been some attempts to measure ATP and sex workers, but all of them have some important problems. Basow and Campanile (1990) developed the 12-item ATP Scale (ATPS), which was designed to capture attitudes, beliefs, and stereotypes surrounding prostitution. Unfortunately, some of its items include multiple sentences (e.g., “Legalization of prostitution means that the state regulates taxes, and licenses whatever form of prostitution is legalized. Thus generally leaves all other forms illegal and involves the establishing of special government agencies to deal with prostitution”), which introduces ambiguity or difficulty in interpretation (Lane, Raymond, and Haladyna 2016). Sawyer and Metz (2009) developed the 10-item ATPS to capture attitudes of men who pay sex workers for sexual services, but problematically, some of its items contain attitudes about sex workers with unclear implications for the construct under study (“Prostitutes make a lot of money”; “Prostitutes genuinely like men”). Levin and Peled (2011) used a 29-item version of their Attitudes toward Prostitutes and Prostitution Scale (APPS) to capture individual attitudes toward sex workers and prostitution within a two-axis matrix. Axis 1 measures degree of choice (choosing) versus victimization (victimized); Axis 2 measures degree of norm conformity (norm-adapted) versus deviance (deviant). However, its items do not cover important aspects about prostitution (e.g., attitudes toward its legal status) and some of them contain pejorative language (e.g., “Most prostitutes are ugly”). Valor-Segura, Expósito, and Moya (2011) developed a measure to assess the legal stance toward prostitution as well as attitudes and beliefs regarding underlying motives and behavior of men who seek sexual services from sex workers. The problem with this scale for our study is that two items contain country comparisons and are therefore also very long. More recently, Bonache et al. (2021) developed the Regulatory Attitudes Toward Prostitution Scale (RAPS), which consists of three subscales addressing attitudes toward regulation: abolition; prohibition; and decriminalization. Despite these fine-grained distinctions regarding regulatory issues, which may be used especially in a legal context, this scale does not take into consideration other areas that are also relevant to a broader view of ATP.

For the purpose of this study, we therefore developed a scale with 22 items to assess ATP. Its items address four areas that turned out to be relevant in a literature search: (1) sexual morality; (2) sexual exploitation versus freedom; (3) freedom of trade; and (4) abolition versus legalization of prostitution.

Wagenaar and Altink (2012) argue that prostitution policy can be seen as moral policy (see also Jonsson and Jakobsson 2017) and the area of sexual morality is also a subject of much discussion in the media (Kaube 2013). Kotsadam and Jakobsson (2011) investigating the effect of Norwegian criminalization of prostitution

on ATP based on longitudinal data from Norway and Sweden, also asked whether it is morally acceptable or unacceptable to buy or offer sexual services. Therefore, it seems important to cover the area of sexual morality.

In their arguments for the abolition of sex work, feminists and politicians often address the issue of sexual exploitation of women through prostitution. On the other hand, women's freedom to choose and carry out their sexuality and activity in a self-determined manner is discussed in just as much detail. Arguments about sexual exploitation versus freedom are therefore also very important and needed to be included when constructing the scale (Hansen and Johansson 2023; Schwarzer 2013).

According to Jakobsson and Kotsadam (2011), the issue of freedom of trade is another important category. The authors argue that ATP and the need to purchase sex services are related to the current prostitution market. Thus, more negative attitudes in the general public should lead to greater stigma, thereby reducing supply and demand. And finally, following Valor-Segura, Expósito, and Moya (2011), a fourth important area is the direct recording of attitudes toward legal attitudes. The legal treatment of prostitution essentially consists of either abolishing or legalizing prostitution.

Overall, the existing scales by Basow and Campanile (1990), Sawyer and Metz (2009), Levin and Peled (2011), and Valor-Segura, Expósito, and Moya (2011) partly cover the four areas, but there is not one scale covering all areas. Our newly developed scale for recording ATP intends to cover all four areas with 22 items.

1.3 | Correlates of ATP

In addition to feminist beliefs, correlates of ATP that have been studied include age, gender, religiosity, political orientation, and sociosexuality. In relation to age, research has shown that older people are more in favor of legalizing prostitution, whereas younger people are more negative about prostitution and more likely to support its criminalization, at least when laws criminalizing customers of sexual services already exist (Kotsadam and Jakobsson 2011; May 1999). In the same vein, a recent study conducted in Spain showed that younger people support the prohibition of prostitution to a greater extent than do older individuals (Meneses-Falcón, Rúa-Vieites, and García-Vázquez 2024).

Regarding gender, numerous studies have consistently shown that men hold more favorable ATP than women do (e.g., Bojanic and Jordán 2023; Calvo and Penadés 2015; Digidiki and Baka 2017). Furthermore, men are more likely to support the legalization of prostitution, whereas women are more likely to support abolitionist laws (Basow and Campanile 1990; Cotton, Farley, and Baron 2002; Jakobsson and Kotsadam 2011; May 1999).

In relation to religiosity, a macro study conducted in 53 countries with 48,630 participants showed that more religious individuals exhibit less favorable ATP (Chon 2015). Abrams and Della Fave (1976), using the Orthodox Christian Belief Scale, which

includes 11 items to measure belief in heaven and hell, the devil and God, also found that very religious people were significantly less likely to support the legalization of prostitution.

Furthermore, regarding political ideology, Jakobsson and Kotsadam (2011) found in a Norwegian and Swedish sample that conservative individuals exhibit less favorable ATP. This finding aligns with the general conclusion of Chon's (2015) multi-country study, which found that individuals with a liberal political ideology held more favorable ATP than did those with a conservative ideology.

Jakobsson and Kotsadam (2011) also found that sexually liberal people of both genders tended to have more positive ATP. However, they used only one item to record sexual liberalism ("Do you think it is okay to have sex with unknown people?" response options from 0, no to 10, yes). A more commonly used measure of individual sociosexuality is the Sociosexual Orientation Inventory (SOI; Simpson and Gangestad 1991), which measures sociosexuality on a bipolar continuum, distinguishing between attached people, who need greater intimacy with a romantic partner, and unattached people, who are willing to engage in casual sex. Based on this, Jackson and Kirkpatrick (2007) developed a scale that distinguishes between short-term mating orientation (STMO) and long-term mating orientation (LTMO). These orientations are understood as independent motivational preferences that may show different patterns of correlation with other variables.

The debate on how to regulate sex work often revolves around the supposed consequences of adopting different measures. Those advocating for legalization have primarily pointed out a series of negative consequences that would result from the abolition or criminalization of prostitution (for a summary of these consequences, see Meneses-Falcón and Rúa-Vieites 2023). However, to the best of our knowledge, the relationship between ATP and the perception of the consequences of its abolition has not been studied yet. With this aim, we incorporated a measure of the perception of consequences of prostitution abolition in our study, hypothesizing that people with more positive ATP should perceive more negative consequences of abolition. If this hypothetical relation is found, the discriminant validity of the new ATP scale would also be strengthened.

Therefore, we examined the relations of each dimension with ATP in this study.

1.4 | Susceptibility to Persuasion and Prostitution Policies

Persuasion may be defined as "the formation or change of attitudes through information processing, usually in response to a message about the attitude object" (Bohner, Erb, and Siebler 2008, 162). Although different theories have been proposed regarding the conditions and mechanisms that lead to effective persuasion, all of them agree on assigning a relevant role to people's prior knowledge in this process. If, as we hypothesize and as some studies also suggest (Escot et al. 2022), legislation on prostitution constitutes a significant source of knowledge generation among citizens, one might expect that

their susceptibility to persuasion through arguments in favor of the abolition or legalization of prostitution would vary depending on the legislative framework of each country. It could be that public opinion is more established in countries where prostitution is clearly regulated (e.g., Norway or Germany), so that their citizens would be less open to persuasion by any arguments in relation to prostitution. Conversely, if this were the case, people from countries where prostitution remains legally ambiguous (e.g., Spain) should be the most influenced by arguments in one or the other direction. To the best of our knowledge, this hypothesis regarding differential susceptibility to persuasion concerning prostitution has not yet been tested.

1.5 | Research Question and Hypotheses

In the present study we examine whether ATP are associated with and reflect the legal situation. Accordingly, we predicted that ATP would be more positive in Germany than in Norway, and that attitudes in Spain would be between those in Germany and Norway. We further examined whether the clearness versus vagueness of the legal situation in a country would be linked to the extent to which participants are open to persuasive arguments toward either side. We hypothesized that participants in both Norway and Germany would be less influenced by persuasive messages in favor of either legalization or abolition, and that their attitudes would mainly reflect the clear legal norm of their respective country. Conversely, we hypothesized that participants in Spain, with its vaguer legal situation, would be influenced more by persuasive messages in favor of legalization as well as abolition; their attitudes would thus reflect both the moderate legal norm of their country and the arguments they read. To summarize, we set out to test the following hypotheses:

Hypothesis 1. *ATP are least positive in Norway and most positive in Germany, with Spain falling in between.*

Hypothesis 2. *In both Norway and Germany, arguments in favor of legalization or abolition of prostitution have a weaker effect on ATP than they do in Spain.*

In addition, with reference to previous research, we examined whether older, male, less religious, politically less conservative, less egalitarian, and more sexually liberal participants would have more positive ATP.

2 | Method

2.1 | Procedure Overview

We conducted synchronous online surveys (accessible from April 20, 2015 to May 24, 2015) in Norwegian, Spanish, and German. Participants were recruited by distributing the respective link to the study at the authors' universities, in social media, and on study platforms. Also, student representative bodies at several universities were asked to publicize the links. Introductory text on the survey's starting page informed participants that the survey addressed "topics of modern society," that participation was voluntary and anonymous, and that it was possible to withdraw from participation at any time by closing the browser window.

Participants in each country could enter a prize draw and thus win one of five Internet coupons worth NOK 250 (Norway) or EUR 20 (Germany and Spain).

Participants first completed items on sociodemographics (including age, gender, religiosity, nationality, and country of residence). Then they were briefly introduced to the topic of prostitution, which was defined as "the exchange of sexual access to a person's body for payment" (see Monto 2004, 161). This was followed by an item asking whether participants would consider using sexual services. At this point, participants were randomly assigned to one of three message conditions (legalization, abolition, or no message; see below for detail). After the message manipulation, they completed the 22-item ATP scale, a 4-item scale on perceived consequences of the abolition of prostitution, a 10-item feminism scale, two items on their political orientation, and a 10-item scale assessing STMO and LTMO.³ All materials were first developed in German and then translated by bilingual persons to Spanish and Norwegian, respectively. All procedures of this study were approved by the relevant ethics committee.

2.2 | Participants and Design

We retained for analysis the data from all adult participants who completed the survey in less than 45 min and were nationals or residents of the country in whose language they participated (96% were both). The Norwegian sample comprised 92 persons (59 female, 33 male; median age 24 years, range 19–70), the Spanish sample 221 persons (151 female, 69 male, 1 diverse; median age 21 years, range 18–51), and the German sample comprised 265 persons (187 female, 75 male, 3 diverse; median age 25 years, range 18–67). Overall, the majority of participants were students (80%). The samples did not differ in terms of gender distribution, $\chi^2(4, N=575)=3.27, p=0.51$. However, the Spanish sample was younger overall than the German and Norwegian samples (see Table 2).

Participants were randomly assigned to one of three message conditions (legalization, abolition, or no message).⁴ Participants in the legalization and abolition conditions read five arguments in favor of either legalization or abolition of prostitution, respectively (see Appendix S1B). Participants in the no-message condition did not read any arguments.

2.3 | Materials

2.3.1 | Interest in Using Sexual Services

Before the message manipulation, participants completed an item asking whether they would consider using sexual services under the assumption that these were legal in their country (1, no, certainly not–7, yes, certainly).

2.3.2 | The ATP Scale

After the message manipulation, participants first completed the ATP scale, which consisted of 22 items designed to cover

the four content areas introduced above (see Appendix S1C for an English translation, and Appendix S1D for the Norwegian, Spanish, and German item wordings). These items were generated by the authors based on a review of the literature, with the consideration of encompassing the four areas of content of interest. All items were to be answered on a scale from 1, do not agree at all to 7, agree completely. Eight items (Numbers 9, 10, 12, 13, 14, 19, 21, and 22) were negatively coded and recoded before analysis. Cronbach α 's of the 22-item scale was excellent: 0.95 for Norway 0.92 for Spain and 0.95 for Germany. For all analyses that follow, we used a single ATP score by averaging across all 22 items.⁵

2.3.3 | Perceived Consequences of the Abolition of Prostitution

Then participants answered four items designed to measure perceived consequences of an abolition of prostitution, all starting with "If prostitution were abolished," The stated consequences were "... human trafficking would ..." (1, decrease-7, increase; recoded); "... gender equality would ..." (1, go down-7, be pushed forward); "... freedom of choice of occupation would ..." (1, decrease-7, increase); and "... this would make the world ..." (1, a worse place-7, a better place). Cronbach's α was 0.71 for Germany, 0.64 for Spain, and 0.77 for Norway.

2.3.4 | Feminist Attitudes

To assess egalitarian-feminist attitudes, we relied on a frequently used short version of the liberal feminist attitude scale (Morgan 1996). We included translations of 10 of its 11 items in the present study. One original item, which pertained to a female national leader as an abstract possibility, was omitted because Germany and Norway already had female heads of government. Two further items' wordings were adapted to a non-US context. Item examples are "A woman should have the same job opportunities as a man" and "Women in our society are treated as second-class citizens" (1, do not agree at all-7, completely agree). Our German and Spanish versions were partly adapted from Bohner, Ahlborn, and Steiner (2010) and from Fagundes et al. (2015), respectively. After reverse-scoring, where appropriate (Items 1, 4, 8, and 10), Cronbach's α was 0.81 for Germany, 0.66 for Spain, and 0.80 for Norway.

2.3.5 | Political Conservatism

To assess political conservatism, we used two items: "When it comes to politics, people often talk about 'left' and 'right.' Where would you locate your general political position on this scale?" (Inglehart and Klingemann 1976, 247) and "Do you consider yourself to be liberal or conservative?" Each item could be answered by moving a slider along a 15-cm horizontal line between the endpoints left (liberal) and right (conservative). When released, the slider would snap to the nearest of 11 equidistant positions along the scale. Responses were coded as 1 (left and liberal, respectively) to 11 (right and conservative, respectively); the two items were averaged into an index of political conservatism.

Cronbach's α was 0.68 for Germany, 0.75 for Spain, and 0.54 for Norway.

2.3.6 | Religiosity

Within the context of sociodemographic information, we assessed religiosity with a single item: "How religious are you?" (response scale from 1, not at all to 7, very).

2.3.7 | Mating Orientations

STMO and LTMO were each assessed with five items taken from Jackson and Kirkpatrick (2007). Item examples are "Sex without love is OK" (STMO) and "I would like to have a romantic relationship that lasts forever" (LTMO); response scale from 1, do not agree at all to 7, completely agree. After reverse-scoring, where appropriate, item scores were averaged into an STMO index (Cronbach's α =0.92 for Germany, Spain, and Norway) and an LTMO index (Cronbach's α =0.90 for Germany, 0.87 for Spain, and 0.84 for Norway).

2.4 | Data Analysis

In addition to presenting descriptive statistics and bivariate correlations among the study variables, we tested Hypothesis 1 with a one-way ANOVA, using country as the factor and participants' scores on ATP as the dependent variable. For Hypothesis 2, we conducted planned comparisons as we had clear hypotheses regarding the influence of persuasive messages on participants from different countries. To do so, we generated contrast weights that combine a predicted main effect of country (coded: Norway=-1; Spain=0; and Germany=+1) with a predicted simple effect of the persuasive message that is twice as large in Spain (coded: pro-abolition=-2; no message=0; and pro-legalization=+2) as in both Norway and Germany (each coded: pro-abolition=-1; no message=0; and pro-legalization=+1). Table 1 shows, step by step, how these two sets of weights were added to result in the final contrast weights used in our analysis.

3 | Results

3.1 | Descriptives and Mean Differences Among Countries

Table 2 shows the means and standard deviations of study variables by country, along with tests for mean differences among countries. Reported interest in using sexual services was relatively low (overall mean=1.84, SD=1.42) and did not differ among countries, $F<1$. This was also true when only male respondents were included (overall mean=2.65, SD=1.87), $p>0.24$, although men considered using sexual services significantly more than women did, $F(1, 568)=100.07$, $p<0.001$, $\eta^2=0.15$. In line with Hypothesis 1, ATP scores overall were within the mid-low range, being lowest in Norway and highest in Germany, with Spain falling in between (also see Figure 1). The effect size of $\eta^2=0.031$ may be characterized as small to medium (Cohen 1988). Pairwise comparisons between countries

were also significant, all $p < 0.02$. A complementary pattern is found for perceived consequences of the abolition of prostitution, with a slightly larger effect size of $\eta^2 = 0.04$; pairwise comparisons between countries were also significant, all $p < 0.021$.

TABLE 1 | Construction of contrast weights representing the predicted pattern of ATP means by country and message condition according to Hypothesis 2.

	Country		
	Norway	Spain	Germany
Step 1: Codes for main effect of country			
Message condition			
Pro-abolition	-1	0	+1
No message	-1	0	+1
Pro-legalization	-1	0	+1
Step 2: Codes for simple effects of message within country			
Message condition			
Pro-abolition	-1	-2	-1
No message	0	0	0
Pro-legalization	+1	+2	+1
Step 3: Final codes for the predicted overall pattern (= sum of codes from Steps 1 and 2)			
Message condition			
Pro-abolition	-2	-2	0
No message	-1	0	+1
Pro-legalization	0	+2	+2

Note: Cell entries are contrast weights representing a predicted main effect of country (Step 1), a predicted simple effect of the persuasive message that is twice as large in Spain as in both Norway and Germany (Step 2), and the sums of these weights, which represent the predicted overall pattern tested (Step 3).

TABLE 2 | Means and standard deviations (in parentheses) of measures by country.

	Norway	Spain	Germany	ANOVA ^c	η^2
USE ^a	1.74 (1.33)	1.84 (1.40)	1.87 (1.47)	$F(2,574) = 0.28$	
ATP ^a	3.43 (1.17)	3.77 (1.09)	4.02 (1.22)	$F(2,575) = 9.29^{***}$	0.031
ABOLISH ^a	4.51 (1.08)	4.15 (1.06)	3.92 (1.00)	$F(2,549) = 10.52^{***}$	0.037
Feminism ^a	5.32 (0.86)	5.96 (0.68)	5.44 (0.85)	$F(2,531) = 31.43^{***}$	0.106
CONSERV ^b	4.25 (2.10)	4.06 (1.77)	4.10 (1.81)	$F(2,520) = 0.31$	
Religiosity ^a	1.91 (1.12)	2.59 (1.62)	2.70 (1.74)	$F(2,570) = 8.28^{***}$	0.028
STMO ^a	4.59 (1.74)	4.44 (1.79)	4.76 (1.81)	$F(2,518) = 1.76$	
LTMO ^a	6.18 (0.92)	5.38 (1.34)	6.09 (1.17)	$F(2,518) = 22.45^{***}$	0.080
Age (years)	26.37 (8.84)	21.98 (4.58)	26.86 (7.53)	$F(2,542) = 32.19^{***}$	0.106

Abbreviations: ABOLISH = perceived consequences of the abolition of prostitution; ATP = attitudes toward prostitution; CONSERV = political conservatism; LTMO = long-term mating orientation; STMO = short-term mating orientation; USE = interest in using sexual services.

^aScales from 1 to 7, with higher values indicating a higher level of the measured variable.

^bScale from 1 to 11, with higher values indicating a more conservative orientation.

^cOne-way analysis of variance by country; denominator degrees of freedom vary because of varying numbers of missing values.

*** $p < 0.001$.

Feminist attitudes also differed significantly among countries, with a medium to large effect size of $\eta^2 = 0.11$. The pattern here was different, however, with feminism being higher in Spain than in both Norway and Germany, $p < 0.001$ for each pairwise comparison, whereas Norway and Germany did not differ, $p > 0.23$. Participants reported rather low political conservatism (overall mean = 4.11, SD = 1.84), with no differences among countries, $F < 1$. The countries differed in religiosity, with a small to medium effect size of $\eta^2 = 0.028$. Norwegians were less religious than both Germans and Spanish, each pairwise test at $p < 0.001$, whereas Germans and Spanish did not differ, $p > 0.44$. There was no difference among countries for STMO (overall mean = 4.61, SD = 1.79), $p > 0.17$. However, LTMO did differ by country, with a medium effect size of $\eta^2 = 0.08$. Pairwise comparisons showed that LTMO was lower for Spain than for both Germany and Norway, each $p < 0.001$, whereas Norway and Germany did not differ, $p > 0.53$. This pattern may be explained by the fact that the Spanish sample was also younger than the Norwegian and German samples, overall $\eta^2 = 0.11$, with pairwise effects each at $p < 0.001$, whereas Norway and Germany again did not differ, $p > 0.57$.

3.2 | Gender Differences

Further analyses showed that there was a large gender difference for ATP in each country, with men ($M_{\text{Norway}} = 4.02$; $M_{\text{Spain}} = 4.13$; $M_{\text{Germany}} = 4.57$) having higher ATP scores than women ($M_{\text{Norway}} = 3.12$; $M_{\text{Spain}} = 3.60$; $M_{\text{Germany}} = 3.78$), all $t > 3.40$, all $p < 0.001$, all Cohen's $d > 1.06$. This replicates previous research (Calvo and Penadés 2015; Jakobsson and Kotsadam 2011).

3.3 | Correlations Among Measures

As can be seen in Table 3, we obtained meaningful patterns of correlations among measures across countries (the overall pattern of correlations for each country are very similar and can

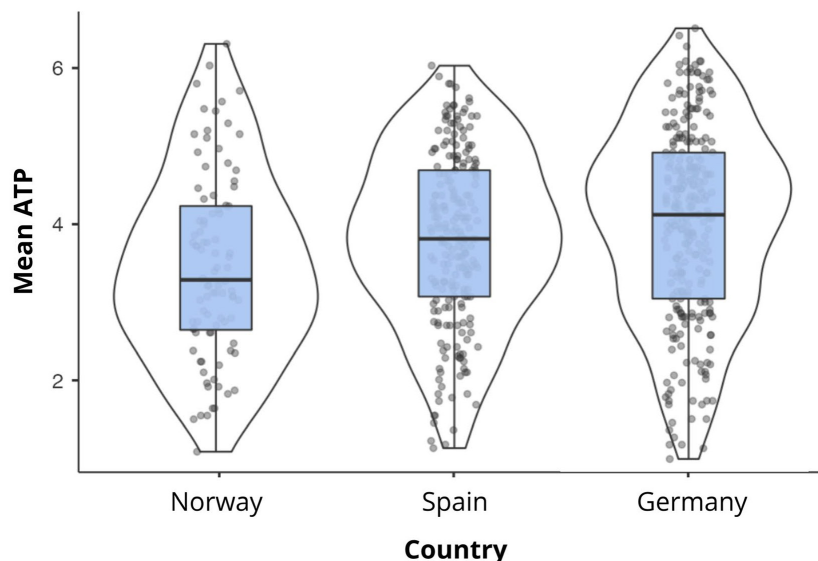


FIGURE 1 | Violin plot of participants' ATP scores in each country. Dots represent individual data points of the mean participants' value of the ATP; summary statistics are provided as boxplots.

TABLE 3 | Intercorrelations of central measures.

	ABOLISH	FEMIN	CONSERV	RELIG	STMO	LTMO
ATP	-0.66***	-0.24***	-0.03	-0.15***	+0.42***	-0.12***
ABOLISH		+0.19***	+0.03	+0.08	-0.28***	+0.09
FEMIN			-0.33***	-0.04	-0.03	-0.10*
CONSERV				+0.26*	-0.25**	+0.11
RELIG					-0.26*	+0.21**
STMO						-0.20**

Abbreviations: ABOLISH = perceived consequences of the abolition of prostitution; ATP = attitudes toward prostitution; CONSERV = political conservatism; FEMIN = feminism; LTMO = long-term mating orientation; RELIG = religiosity; STMO = short-term mating orientation.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

be seen in Supporting Information). ATP scores were negatively correlated with perceived consequences of the abolition of prostitution, feminist attitudes, religiousness, and LTMO. Also, ATP scores were positively correlated with STMO. These correlations speak to the construct validity of the ATP scale and are in line with previous studies (Jonsson and Jakobsson 2017). Further analyses showed that ATP was not correlated with age. Finally, the behavioral tendency to use sexual services correlated positively with ATP, $r(577) = 0.44$, $p < 0.001$.

3.4 | Effects of Persuasive Messages

To test Hypothesis 2, which referred to weaker effects of pro-abolition and pro-legalization messages in Norway and Germany as compared to Spain, we performed a planned-contrast analysis (see Rosenthal and Rosnow 1985), using the contrast weights displayed in Table 1, and participants' scores in ATP as dependent variable. As mentioned above, these weights combine a predicted main effect of country (Norway < Spain < Germany)

and a predicted effect of the persuasive messages that is twice as large in Spain than in either Norway or Germany. This analysis yielded a significant contrast effect in line Hypothesis 2, $t(569) = 3.96$, $p < 0.001$, $\eta^2 = 0.027$. A test of residual between-condition effects (see Abelson and Prentice 1997) was not significant, $F(7, 569) = 1.64$, $p > 0.12$. This suggests that our a priori contrast provides a reasonable fit to the observed data pattern. Nonetheless, the pattern of observed means appeared not fully in line with our prediction (see Table 4).

We therefore tested possible effects of the message conditions within each country sample in separate one-way ANOVAs including linear and quadratic trend tests. This analysis yielded no message effects for either Norway or Germany, both $F < 1$ and all $p > 0.18$ for the trend tests. For Spain, however, we found significant message effects both in the overall ANOVA, $F(2, 218) = 3.27$, $p = 0.040$, and in the linear trend test, $t(218) = 2.56$, $p = 0.011$ ($p > 0.88$ for the quadratic trend). Thus, only participants in Spain, where the country's legislation does not favor a clear legalization or abolition position, were persuaded by

TABLE 4 | Observed ATP means and standard deviations (in parentheses) by country and message condition.

Message condition	Country		
	Norway	Spain	Germany
Pro-abolition	3.33 (1.21)	3.55 (1.08)	4.09 (1.22)
No message	3.59 (1.18)	3.79 (1.02)	3.81 (1.02)
Pro-legalization	3.44 (1.13)	3.96 (1.10)	4.04 (1.30)

Note: Scale from 1 to 7, with higher values indicating more positive attitudes toward prostitution. Valid N is 92 for Norway, 221 for Spain, and 265 for Germany.

arguments for either side. Participants in Norway and Germany, however, where either legalization or abolition represent the legal norm, remained uninfluenced by arguments for either position. Instead, ATP in these countries mainly reflected the legal status quo.⁶ If anything, the data pattern suggests that both Norwegians and Germans reported even more polarized attitudes in line with their country's legislation after receiving any arguments than after receiving no arguments (see Table 4). This pattern, though not significant, corresponds to previous research on biased argument processing for strongly politicized issues (Lord, Ross, and Lepper 1979).

3.5 | Taking Covariates Into Account

Finally, we repeated the analyses related to Hypotheses 1 and 2 using multiple regression analyses (MRAs) that controlled for possible associations of ATP with the following covariates: gender, age, religiosity, feminism, and conservatism. In the first MRA, to further test Hypothesis 1, a linear trend (coded: Norway = -1; Spain = 0; and Germany = +1) and a quadratic trend (coded: Norway = +1; Spain = -2; and Germany = +1) on the country variable were included as predictors, to jointly account for the between-countries variance, along with all the covariates. This yielded a medium-sized joined effect of country, $F(2, 477) = 12.27$, $p < 0.001$, $\eta^2 = 0.051$. Thus, when controlling for the covariates, the effect size of country on ATP was close to medium-sized and larger than the one obtained in the analysis without covariates, corroborating Hypothesis 1. The joint effect of the covariates was also significant as expected, $F(5, 477) = 16.62$, $p < 0.001$, $\eta^2 = 0.148$.

In the second MRA, to further test Hypothesis 2, a predictor variable representing the a priori contrast shown in Table 1 was entered along with all the covariates. This yielded a medium-sized effect of the a priori contrast, $F(1, 478) = 16.45$, $p < 0.001$, $\eta^2 = 0.033$, that was somewhat larger than the respective test without covariates included, thus corroborating Hypothesis 2. The joint effect of the covariates was also significant as expected, $F(5, 478) = 15.51$, $p < 0.001$, $\eta^2 = 0.140$.

4 | Discussion

Although knowing public opinion on prostitution in different countries constitutes a very relevant social issue, previous studies have focused on specific aspects of this phenomenon. To attain a more comprehensive view of social perception about prostitution, in this study we used a comprehensive 22-item scale (ATP) whose

content covered various aspects of prostitution. Despite its breadth, the ATP scale turned out to be essentially unidimensional. It also showed high internal consistencies in all three countries studied, which indicates that participants already had a clear opinion on the topic and responded accordingly. In the total sample and in the three countries, ATP and perceived consequences of the abolition of prostitution correlated negatively with one another, which provides a first indication of the validity of the scale.

In their investigation of public opinion on criminality across nations, Stack et al. (2010, 19) examined whether the probability of legal prostitution is high if the acceptance of prostitution is also high at a national level. In the present study, this question can be answered affirmatively, at least for young, mostly college students. Here, ATP were least positive in Norway and most positive in Germany, with Spain falling in between. This finding reflects the legal situation in the three countries: In Norway prostitution is illegal, in Germany it is legal, and in Spain it is not clearly regulated. Similar findings were reported by Jonsson and Jakobsson (2017) and Immordino and Russo (2015), who also observed that citizens of European countries where prostitution was criminalized were less tolerant to sex work than citizens of countries where prostitution was legalized. This congruence between public opinion and legal stances has also been documented for other socially disputed issues. For instance, Slenders, Sieben, and Verbakel (2014), in their examination of public opinion and laws on same-sex partnerships and marriage (an issue as controversial and emotionally debated as prostitution) found that same-sex partnership laws were positively associated with people's tolerance of homosexuality. This finding could be explained by a psychological tendency called *status quo bias* (Samuelson and Zeckhauser 1988): When choosing between several alternatives, people often prefer to hold on to what already exists. Evidence of the power of the status quo could be found in the fact that Spanish ATP fell somewhere between those of Norwegians and Germans, although the Spanish sample was younger and more feminist. However, although the legal situation of prostitution is different in Spain and Germany and the data from our main dependent variable (ATP) align with this legal situation, recent studies, both representative and non-representative, conducted in these two countries (Alice-Schwarzer-Stiftung 2020; Langenbach et al. 2023; Méndez-Juez, García-Santamaría, and Pérez-Castaños 2023; Meneses-Falcón, Rúa-Vieites, and García-Vázquez 2024) indicate a greater convergence in public opinion in these two countries, with attitudes mostly skeptical toward prostitution, although showing divergent approaches regarding the measures to be taken for its regulation.

The hypothesis that arguments in favor of legalization or abolition of prostitution would have a weaker influence on ATP in

both Norway and Germany than in Spain was also supported. Only in Spain arguments for abolition led to more negative ATP and arguments for legalization led to more positive ATP, whereas participants in Norway and Germany remained uninfluenced by these arguments. These findings could be explained by the fact that prostitution policy is a kind of moral policy (Bonache et al. 2021; Wagenaar and Altink 2012). The topic of prostitution is a highly emotional topic and therefore many people have probably already formed their own solid opinion on it; the arguments presented therefore had less influence on their opinion.

It is even possible that presenting any arguments may have contributed to a polarization of attitudes in Norwegians and Germans, as their attitudes were (nonsignificantly) more in line with their country's legislation after reading any arguments than after not reading arguments. This pattern is comparable to previous findings on biased processing of arguments and attitude polarization: Lord, Ross, and Lepper (1979), for example, observed that people who already had established opinions about a complex social issue were more likely to examine relevant empirical evidence in a biased manner. The authors analyzed opinions on the death penalty, perhaps as emotive an issue as prostitution. Findings from this study were that both supporters and opponents of the death penalty viewed the results of alleged studies as supporting their own beliefs. They also rated results that matched their view as more persuasive and as providing more evidence. Lord, Ross, and Lepper (1979) argue that attitude polarization occurred. Further research might address the possibility of biased processing more specifically with respect to messages about prostitution.

With regard to gender, it was replicated for all three countries that men had more positive ATP than women (Bojanic and Jordán 2023; Cotton, Farley, and Baron 2002; Jakobsson and Kotsadam 2011; Méndez-Juez, García-Santamaría, and Pérez-Castaños 2023), but contrary to previous research, older participants were not more positive about prostitution than younger participants (Kotsadam and Jakobsson 2011; May 1999; Meneses-Falcón, Rúa-Vieites, and García-Vázquez 2024). Previous findings on religiosity could also be confirmed: Less religious participants were more positive toward prostitution than were highly religious participants (Calvo and Penadés 2015; Chon 2015). Contrary to the findings reported by Jakobsson and Kotsadam (2011) and Chon (2015), in our total sample, a stronger adherence to conservative political ideology was not significantly related to less favorable ATP. Interestingly, short-term sexual orientation was positively associated with ATP, which Jakobsson and Kotsadam (2011) also found in their study. Likewise, this connection between short-term sexual orientation and ATP was not different for men and women. In addition, the behavioral tendency to use sexual services was positively related to ATP. Moreover, men considered engaging in sexual services more than women, consistent with the finding that men are more positive about prostitution than women (Bojanic and Jordán 2023; Calvo and Penadés 2015).

4.1 | Theoretical and Applied Implications

Our study provides some theoretical and practical implications. Based on theoretical and methodological considerations, we

introduced a new scale to measure ATP. The 22-item version was highly reliable and showed some evidence of construct validity in all three languages; it thus offers a good and comprehensive self-report measure of ATP.

With respect to practical implications, our study shows that prostitution laws may be related to people's ATP. Laws dictate what behavior is right and what is wrong. But laws can also be the expression of public opinion in a country (Van den Akker, Van der Ploeg, and Scheepers 2013). In any case, how laws are communicated is important. Prostitution is a complex and controversial issue. In the context of prostitution policy, the media often mention prostitution in the same breath as human trafficking and forced prostitution (Czarnecki et al. 2014; Wagenaar and Altink 2012). According to Wagenaar and Altink (2012), this is just one of the reasons why prostitution policy can be described as moral policy, making it extremely difficult to design prostitution policy and formulate the right laws.

How laws should be communicated in the best possible way is difficult to answer. The comparison of countries in this study provides initial indications of the importance of also considering and including ATP. Méndez-Juez, García-Santamaría, and Pérez-Castaños (2023) emphasized that there are few studies that capture attitudes and opinions of the general population toward prostitution/sex work. Our study makes an important contribution to the relationship between prostitution laws and ATP.

4.2 | Limitations and Future Directions

Several limitations should be considered when evaluating the results of this study. To investigate the research question, parallel online surveys were conducted in Norway, Spain, and Germany. Online surveys can be problematic for several reasons, including problems related to sampling, problems related to the consistency of answers, and problems related to participant motivation (Stanton 1998, 711). Online surveys are always selective; because not all people have access to the Internet, the entire population cannot be reached. In addition, samples obtained through the Internet are biased by self-selection (Kraut et al. 2004). The manner in which participants were recruited for this study was also selective as it was partly a snowball process. Samples recruited through Internet survey methods are diverse but unrepresentative (Best et al. 2001). However, Gosling et al. (2004) found that the quality of Internet data collection methods was comparable to that of paper-and-pencil methods, and that the data collection was not as flawed as commonly thought. Overall, the samples used here are not representative, because in all three countries, especially Spain, they had a large proportion of students. Although non-students could also participate, the distribution method followed, with the study being primarily launched in universities, resulted in this majority of student participants. This method of convenience sampling nonetheless has produced samples that are similar in age and education, which may also be considered a positive aspect in comparative studies. Nonetheless, the generalization of these results to the general population should be made with caution.

Another limitation is the fact that examining samples from different nations entails some difficulties, in particular due to the

different culture and language. Linguistic differences can have an impact on how the same statement is interpreted (Briley, Wyer Jr, and Li 2014; Hofstede 2001). It is therefore not clear whether the contents of the survey were understood and interpreted in exactly the same way by all participants. Finally, another limitation of the method is that the causal direction of most findings cannot be unequivocally established. Thus, it is not clear whether laws affect ATP in a country or vice versa. For example, Norwegians may possess a less favorable attitude toward prostitution due to their legislation. However, it is also possible that their opposing ATP have driven the adoption of abolitionist legislation (see also Slenders, Sieben, and Verbakel 2014). We also acknowledge that other variables may have influenced our results. Factors such as cultural differences, socioeconomic conditions, and individual experiences with prostitution could play a role in shaping attitudes and responses. Future research should consider these variables to provide a more comprehensive understanding of the influences at play.

One final limitation of our study relates to the use of the word “prostitution” in most of our measures. As some works suggest (e.g., Mcmillan, Worth, and Rawstorne 2018), the term “prostitution” carries more negative connotations than the alternative “sex work,” which may have conditioned the participants’ responses in some way.

Future research should clarify the applicability of the scale to other, for example, older, populations. In addition, further studies are needed to capture other psychometric properties such as retest reliabilities. In the future, when examining public opinion in relation to prostitution and prostitution laws, other possible influencing factors should also be included, such as satisfaction with one’s own country’s rule of law. Finally, it is also important that future research address the opinion of the sex workers, not only regarding the legal regulation of prostitution, but also on other aspects such as their living situation, safety, and health.

To sum up, in this study we present a psychometrically reliable and valid new scale, developed in three languages, to assess ATP in Norway, Spain, and Germany. Participants’ responses reflected the countries’ legislation, being least positive toward prostitution in Norway, most positive in Germany, and between both in Spain. Moreover, openness to persuasion with arguments in favor or opposed to prostitution was observed in ATP scores only in Spain, where the legal situation is ambiguous.

Author Contributions

J.L.M., P.R.T., F.S., and G.B.: study design and collection of data. J.L.M., P.R.T., and G.B.: drafting the manuscript, data processing, and analyses. J.L.M., P.R.T., F.S., and G.B.: critical revisions of the manuscript. All authors contributed to the article and approved the submitted version.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data will be available upon request to the corresponding author.

Endnotes

¹ We realize the possible stigmatizing connotations of the terms “prostitution” and “prostitutes” (Hansen and Johansson 2023). For this reason, we will use the term “sex workers” instead of “prostitutes” to refer to women engaged in prostitution, aiming to avoid the pejorative connotations often associated with the latter term. However, when referring to the phenomenon, as this study is about its social perception linked to legislation on the topic in three European countries, we will mostly use the term “prostitution,” not only because it appears in the legislations of those three countries but also because we believe it currently entails less semantic ambiguity. This is also more in line with the usage of this term in our materials and in most other scales and studies analyzing its social perception.

² We are aware that the different forms of prostitution regulation are not limited to two (legalization or abolition) (see Bonache et al. 2021; Méndez-Juez, García-Santamaría, and Pérez-Castaños 2023). However, the public debate and societal perception regarding prostitution usually focus on these two primary forms of prostitution regulation.

³ In addition, the survey contained items on constructs that will not be discussed here: membership in a religious group, political party preference, and the actual and desired legal situation in the participant’s country.

⁴ Each of the message conditions was further divided into one of two source conditions (feminist source vs. no source mentioned) in order to explore any matching effects regarding the source and recipient’s feminism. This manipulation had no effect, however, and will not be further discussed.

⁵ We explored the factorial structure of the scale for each country, performing a factor analysis with maximum-likelihood extraction and promax rotation (Fabrigar et al. 1999) and comparing congruency coefficients among the country samples for one-, two-, three-, and four-factor solutions (Lorenzo-Seva and Ten Berge 2006). Both analyses yielded a consistent pattern only for the one-factor solution.

⁶ We have run the same analyses with participants’ scores in “Perceived Consequences of the Abolition of Prostitution” as for ATP. The overall contrast is significant as well, in line with Hypothesis 2, $t(543)=4.10$, $p<0.01$. However, the ANOVA within Spain is not significant, $F(2, 209)=1.77$, $p=0.17$, and the linear trend within Spain is only marginal, $t(209)=1.83$, $p=0.061$. However, this weaker effect of message on this variable could be due to the lower reliability of the four items abolition measure (especially in Spain). A table with these data can be seen in the Appendix S1F.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.