Who Supports Gender Equality? Age, Education, and Sexism in the Shadow of Argentina's Radical Right

Supporting Information

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Replication. Replication materials for all the results and findings are available at the Harvard Dataverse, at: https://doi.org/10.7910/DVN/Q50DQK.

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Appendix A: Data

National survey

This manuscript leverages an original, nationally representative survey conducted in Argentina. The data were collected as part of the *Encuesta de Satisfacción Política y Opinión Pública* (ESPOP), based at Universidad de San Andrés.

The questionnaire was administered to a sample of two thousand adults before the 2023 presidential elections, in March and May of that year, and to another sample of two thousand adults after the election, in May and November of the following year. However, in the two post-election surveys, some relevant questions were only asked to a subset of respondents, reducing the effective sample size to approximately 330 adults in each wave.

Wave		**Obs**
2023-03	Pre-election	1,001
2023-05	Pre-election	1,001
2024-05	Post-election	335
2024-11	Post-election	330
Total sample		**2,667**

The four waves were pooled in the analysis to increase the precision of model estimates.

ESPOP is a recurring survey conducted every two months, interviewing a random sample of approximately one thousand adults aged 18 and older in Argentina. It employs quotas based on age and social status to ensure national representativeness. The survey is conducted nationwide.

The fieldwork was carried out by Netquest, a polling company. Respondents were randomly selected from the Netquest panel, and surveys were conducted online. Survey participation was anonymous, and researchers did not retain any contact information of the respondents.

Attitudes toward Gender

Attitudes toward gender are measured following Swim's concept of modern sexism (see Swim et al. 1995; Swim & Cohen 1997). This framework characterizes sexism not by overt hostility, but by the denial of structural barriers to gender equality. From this perspective, individuals holding sexist attitudes tend to attribute existing gender disparities to women's personal choices rather than to systemic factors.

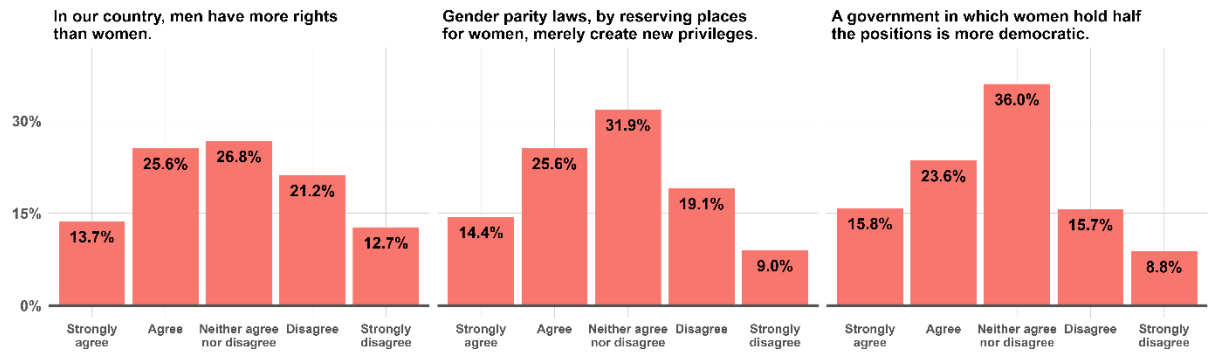
Respondents were presented with three statements related to gender equality and asked to indicate their level of agreement on a five-point scale, ranging from *strongly agree* to *strongly disagree*. The statements are listed in **Table A-1**.

Table A-1. Statements of gender relations included in the surveys

	Original wording	English translation
(1)	En nuestro país, los hombres tienen más derechos que las mujeres.	In our country, men have more rights than women.
(2)	Las leyes de paridad de género, al reservar lugares para las mujeres, lo que hacen es crear nuevos privilegios.	Gender parity laws, by reserving places for women, merely create new privileges.
(3)	Un gobierno en el que las mujeres ocupan la mitad de los cargos es un gobierno más democrático.	A government in which women hold half the positions is more democratic.

Figure A-1 displays the distribution of responses for each of the three statements. The percentages do not sum to 100% because respondents who answered "Don't know" or did not respond are excluded from the figure.

Figure A-1. Distribution of survey answers



The first item captures public recognition of gender inequality. A common feature of modern sexism is the denial that such inequality exists—pointing to women's progress as evidence that discrimination is no longer an issue. To assess these perceptions, respondents were asked whether they believe men have more rights than women. As shown in the left panel of **Figure A-1**, responses are relatively balanced, with a slight lean toward agreement. Overall, 39.3% of respondents agree or strongly agree, indicating acknowledgment of gender inequality.

The second item reflects attitudes toward government interventions. If gender inequality is denied, the need for corrective policies is often dismissed as well. To capture these views, respondents were asked whether gender parity laws merely create new privileges for women. The center panel reveals a significant degree of skepticism—40.0% of respondents agree or strongly agree with the statement, suggesting that many view such laws as unfair advantages rather than necessary reforms.

The third item addresses the perceived relevance of gender equality to democratic governance. Modern sexism often minimizes the importance of gender inequality, framing it as a marginal or

exaggerated concern. To evaluate the perceived democratic value of gender balance in government, respondents were asked whether a government in which women hold half the positions is more democratic. The right panel shows that 39.4% of respondents agree or strongly agree, indicating some support for gender parity as a democratic ideal.

Dependent variable

The main dependent variable in the analysis is a **Modern Sexism Index**, constructed from the three items related to modern sexism using principal components analysis (PCA).

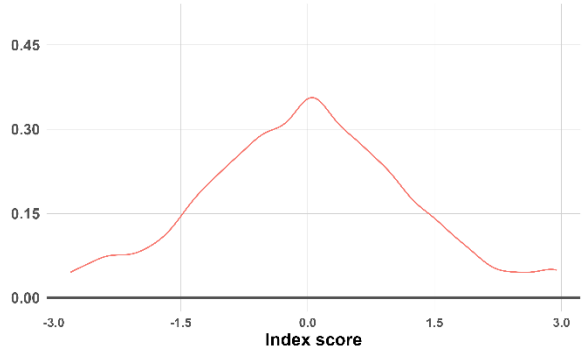
Table A-2. Loadings and Explained Variance from PCA of Modern Sexism Indicators

Importance of components	PC1	PC2	PC3
Standard deviation	1.2489	0.9248	0.7649
Proportion of Variance	0.5199	0.2851	0.1950
Cumulative Proportion	0.5199	0.8050	1.0000
Correlation of Components	**PC1**	**PC2**	**PC3**
…men have more rights than women.	0.6317	-0.3103	-0.7104
Gender parity laws … create new privileges.	-0.4535	-0.8912	-0.0140
…women hold half the positions is more democratic.	0.6288	-0.3310	0.7036

The upper panel of **Table A-2** reports the standard deviation and proportion of variance explained by each principal component. The first component (PC1) accounts for 52% of the total variance in the data, indicating it captures a substantial portion of the common variation among the three indicators.

The lower panel displays the correlation (or "loading") of each original variable with the principal components. The first component is positively associated with two items: the belief that men have more rights than women ($r = 0.63$) and the belief that a government with equal representation of women is more democratic ($r = 0.63$). It is moderately and negatively associated with the belief that gender parity laws create new privileges ($r = -0.45$). These patterns suggest that this component captures a general orientation toward acknowledging gender inequality and supporting corrective measures.

Figure A-2. Distribution of Modern Sexism Index



The Modern Sexism Index corresponds to the first principal component (PC1). **Figure A-2** shows the distribution of the Index, which ranges from -2.802 to 2.946, with a mean of 0. Higher values indicate more sexist attitudes, while lower values reflect greater recognition of gender inequality and support for gender equality measures.

Secondary outcome variables

A secondary analysis uses the components of the Index as dependent variables, to assess the internal consistency of the composite measure.

Each item was measured using a five-point response scale, from *strongly agree* to *strongly disagree*. The distribution of responses for each item is shown above in **Figure A-1**.

Independent and control variables

The main **independent variables** in the regression models are gender, age, and education, defined as follows:

Female. Dummy variable. It indicates whether the respondent self-identified as a woman. The ESPOP survey records gender in binary form (male or female).

Age. Respondent's age at the time of the interview, recorded as a continuous variable.

Education. Respondent's highest level of educational attainment. The ESPOP survey categorizes respondents into eleven educational levels.

For the regression models, these categories are recoded into four dummy variables:

- Low education (baseline): Some high school, or less.
- Medium-low education: Completed high school.
- Medium-high education: Associate degree (non-university) or some college.
- High education: College degree or graduate-level education.

Low education is used as the model baseline.

The models also include **control variables** such as employment status, region and survey wave. These control variables are defined as follows:

Employment. Respondent's self-reported employment status. The ESPOP survey includes seven employment categories and an additional measure that identifies whether employed respondents work in the public sector.

For the regression models, this information is recoded into four dummy variables:

- Public employees
- Unemployed
- Retired
- Inactive, including non-working students and those dedicated to domestic chores.

Respondents employed outside the public sector serve as the model baseline.

Region. A categorical variable indicating the respondent's place of residence, grouped into eight geographic areas:

- City of Buenos Aires (CABA)
- Greater Buenos Aires (GBA)
- Buenos Aires (PBA), excluding municipalities in Greater Buenos Aires.
- Cuyo: Includes La Rioja, San Juan, San Luis, and Mendoza.
- Center (Centro): Includes Córdoba, Entre Ríos, and Santa Fe.
- North-West (NOA): Includes Catamarca, Jujuy, Salta, Tucumán, and Santiago del Estero.
- North-East (NEA): Includes Corrientes, Chaco, Formosa, and Misiones.
- Patagonia (Sur): Includes Chubut, La Pampa, Neuquén, Río Negro, Santa Cruz, and Tierra del Fuego.

Wave. A categorical variable indicating the survey wave (year-month).

- 2023-03
- 2023-05
- 2024-05
- 2024-11

Appendix B: Model estimation

The empirical analysis is based on a series of linear mixed-effects models. Let j index country regions, let k index survey waves, and let i index survey respondents. The analysis is captured by:

$$y_i \sim N\left(X_{jk[i]}\beta, \sigma_y^2\right)$$

where y_i captures the Modern Sexism Index's score of respondent i (main analysis) or the response of respondent i to an Index component (complementary analysis).

This manuscript examines the influence of age and education on sexism, conditional to gender. Consequently, the empirical section estimates two equations,

(1) interacting gender with age, as follows:

$$\begin{aligned} X_{jk[i]}\beta = \alpha_{j[i]} + \gamma_{k[i]} + \beta_1 female_i + \beta_2 age_i + \beta_3 {age_i}^2 \\ + \beta_4 medLo\ Ed_i + \beta_5 medHi\ Ed_i + \beta_6 Hi\ Ed_i \\ + \rho_1 (fem \times age)_i + \rho_2 (fem \times age^2)_i + \delta Z_i \end{aligned}$$

(2) interacting gender with education, as follows:

$$\begin{aligned} X_{jk[i]}\beta = \alpha_{j[i]} + \gamma_{k[i]} + \beta_1 female_i + \beta_2 age_i + \beta_3 {age_i}^2 \\ + \beta_4 medLo\ Ed_i + \beta_5 medHi\ Ed_i + \beta_6 Hi\ Ed_i \\ + \omega_1 (fem \times medLo\ Ed)_i + \omega_2 (fem \times medHi\ Ed)_i \\ + \omega_3 (fem \times Hi\ Ed)_i + \delta Z_i \end{aligned}$$

The term $X\beta$ is a linear predictor, where $female$, age and the binary terms of education ($medLo\ Ed$, $medHi\ Ed$ and $Hi\ Ed$) are the main independent variables in the equations; a set of β captures the effect of these predictors; a set of ρ captures the interaction between age and gender; a set of ω captures the interaction between education and gender; and δ captures the effect of a Z vector of potential individual confounders.

$$\alpha_j \sim N(\mu_\alpha, \sigma_\alpha^2)$$

$$\gamma_k \sim N\left(\mu_\gamma, \sigma_\gamma^2\right)$$

Models also include region- and wave-level varying intercepts: α_j is a region-level intercept for region j, and γ_k is a wave-level varying intercept for ESPOP wave k. These varying intercepts capture potential idiosyncratic regional and time differences in attitudes toward gender.

Results of generalized linear mixed-effects models (Gelman and Hill 2007; Bates et. al 2015) are reported in Tables C-1 and C-2 (main analysis) and Tables C-3 and C-4 (complementary analysis) in Appendix C. The prediction intervals in Figures 1, 2 and C-1 come from the posterior simulations of beta, over 50,000 independent simulation draws (Gelman and Su 2016).

Appendix C: Model results

Main analysis: Modern Sexism Index

Tables in this section examine the effect of **age** (Table C-1) and **education** (Table C-2) over the Modern Sexism Index.

Table C-1. Effect of Age over Modern Sexism Index. Mixed-effects regression models.

	Model 1	Model 2	Model 3
	Estimate (Std. error)	Estimate (Std. error)	Estimate (Std. error)
Female	-0.5361	-0.6121	-0.6054
	(0.3985)	(0.3989)	(0.3976)
Age	0.0187	0.0302*	0.0298*
	(0.0128)	(0.0136)	(0.0136)
Age (sq.)	-0.0003†	-0.0004**	-0.0004**
	(0.0001)	(0.0001)	(0.0001)
Complete high-school	-0.0337	-0.0113	-0.0249
	(0.1054)	(0.1055)	(0.1053)
Associate degree or some college	-0.0686	-0.0481	-0.0558
	(0.0980)	(0.0984)	(0.0982)
College degree, or higher	0.0698	0.1191	0.1133
	(0.1031)	(0.1046)	(0.1045)
Female x Age	-0.0167	-0.0138	-0.0142
	(0.0185)	(0.0185)	(0.0184)
Female x Age (sq.)	0.0002	0.0002	0.0002
	(0.0002)	(0.0002)	(0.0002)
Public employee		-0.1253	-0.1398*
		(0.0689)	(0.0689)
Unemployed		-0.0869	-0.1133
		(0.1059)	(0.1058)
Retired		0.1198	0.1067
		(0.1032)	(0.1031)
Inactive		0.2187*	0.1963*
		(0.0909)	(0.0908)
(Intercept)	0.0973	-0.1562	-0.1231
	(0.3039)	(0.3259)	(0.3276)
Random effects			
	Std. dev.	Std. dev.	Std. dev.
Region			0.1138
Wave	0.0040	0.0063	0.0094
(Residual)	1.1897	1.1871	1.1827
AIC	7,306.516	7,312.544	7,306.308
BIC	7,369.505	7,398.437	7,397.927
Observations	2,267	2,267	2,267
Groups: Region			8
Groups: Wave	4	4	4

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Table C-2. Effect of Education over Modern Sexism Index. Mixed-effects regression models.

	Model 1	Model 2	Model 3
	Estimate (Std. error)	Estimate (Std. error)	Estimate (Std. error)
Female	-0.3159†	-0.3655*	-0.3788*
	(0.1823)	(0.1834)	(0.1831)
Age	0.0168†	0.0292**	0.0289**
	(0.0090)	(0.0100)	(0.0101)
Age (sq.)	-0.0002*	-0.0004**	-0.0003**
	(0.0001)	(0.0001)	(0.0001)
Complete high-school	0.0431	0.0512	0.0322
	(0.1401)	(0.1401)	(0.1399)
Associate degree or some college	0.1135	0.1166	0.0962
	(0.1307)	(0.1309)	(0.1308)
College degree, or higher	0.3490**	0.3773**	0.3683**
	(0.1347)	(0.1356)	(0.1353)
Female x Med-lo Educ.	-0.1986	-0.1737	-0.1606
	(0.2118)	(0.2118)	(0.2114)
Female x Med-hi Educ.	-0.4346*	-0.4012*	-0.3746†
	(0.1968)	(0.1972)	(0.1968)
Female x Hi Educ.	-0.6869***	-0.6481**	-0.6422**
	(0.2073)	(0.2085)	(0.2080)
Public employee		-0.1350*	-0.1496*
		(0.0687)	(0.0688)
Unemployed		-0.0928	-0.1192
		(0.1055)	(0.1055)
Retired		0.1522	0.1403
		(0.1026)	(0.1024)
Inactive		0.1730†	0.1506†
		(0.0914)	(0.0914)
(Intercept)	-0.1038	-0.3368	-0.3021
	(0.2266)	(0.2503)	(0.2529)
Random effects			
	Std. dev.	Std. dev.	Std. dev.
Region			0.1132
Wave	0.0000	0.0000	0.0000
(Residual)	1.1868	1.1844	1.1801
AIC	7,277.898	7,284.882	7,278.816
BIC	7,346.613	7,376.501	7,376.162
Observations	2,267	2,267	2,267
Groups: Region			8
Groups: Wave	4	4	4

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Complementary analysis: Index's components

Tables in this section examine the effect of **age** (Table C-3) and **education** (Table C-4) over the three components of the Modern Sexism Index.

Table C-3. Effect of Age over Modern Sexism Index's Components. Mixed-effects regression models.

	Men have more rights	Quotas are unfair	Parity is more democratic
	Estimate (Std. error)	Estimate (Std. error)	Estimate (Std. error)
Female	-0.6788†	0.1295	-0.5229
	(0.3747)	(0.3816)	(0.3593)
Age	0.0171	-0.0213	0.0097
	(0.0131)	(0.0132)	(0.0126)
Age (sq.)	-0.0002†	0.0002	-0.0002
	(0.0001)	(0.0001)	(0.0001)
Complete high-school	-0.1827†	0.0053	0.0791
	(0.0977)	(0.0992)	(0.0931)
Associate degree or some college	-0.2733**	0.0576	0.2228*
	(0.0912)	(0.0925)	(0.0868)
College degree, or higher	-0.2359*	-0.0636	0.4047***
	(0.0977)	(0.0989)	(0.0930)
Female x Age	-0.0092	0.0079	-0.0084
	(0.0174)	(0.0177)	(0.0167)
Female x Age (sq.)	0.0002	-0.0001	0.0002
	(0.0002)	(0.0002)	(0.0002)
Public employee	-0.0663	0.0739	-0.1784**
	(0.0668)	(0.0664)	(0.0637)
Unemployed	-0.1377	0.0508	-0.0452
	(0.1010)	(0.1008)	(0.0965)
Retired	0.0514	-0.0813	0.0563
	(0.0999)	(0.0993)	(0.0949)
Inactive	0.2134*	-0.0533	0.0238
	(0.0850)	(0.0869)	(0.0808)
(Intercept)	3.3061***	3.1374***	2.7852***
	(0.3143)	(0.3152)	(0.3029)
Random effects			
	Std. dev.	Std. dev.	Std. dev.
Region	0.1432	0.1059	0.0598
Wave	0.0000	0.0158	0.0894
(Residual)	1.1758	1.1514	1.1161
AIC	7,856.215	7,376.198	7,522.930
BIC	7,949.063	7,468.242	7,615.614
Observations	2,448	2,328	2,423
Groups: Region	8	8	8
Groups: Wave	4	4	4

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Table C-4. Effect of Education over Modern Sexism Index's Components. Mixed-effects regression models.

	Men have more rights	Quotas are unfair	Parity is more democratic
	Estimate (Std. error)	Estimate (Std. error)	Estimate (Std. error)
Female	-0.5653***	-0.0531	-0.2801†
	(0.1676)	(0.1714)	(0.1599)
Age	0.0189*	-0.0178†	0.0128
	(0.0096)	(0.0097)	(0.0092)
Age (sq.)	-0.0002*	0.0002†	-0.0002†
	(0.0001)	(0.0001)	(0.0001)
Complete high-school	-0.2030	-0.1248	0.1035
	(0.1344)	(0.1337)	(0.1265)
Associate degree or some college	-0.2188†	-0.0977	0.3155**
	(0.1258)	(0.1248)	(0.1179)
College degree, or higher	-0.1029	-0.2517†	0.5833***
	(0.1305)	(0.1293)	(0.1226)
Female x Med-lo Educ.	0.0302	0.3024	-0.0720
	(0.1949)	(0.1988)	(0.1860)
Female x Med-hi Educ.	-0.1340	0.3528†	-0.2242
	(0.1816)	(0.1851)	(0.1733)
Female x Hi Educ.	-0.3320†	0.4448*	-0.4437*
	(0.1932)	(0.1965)	(0.1846)
Public employee	-0.0717	0.0760	-0.1837**
	(0.0668)	(0.0663)	(0.0637)
Unemployed	-0.1425	0.0506	-0.0451
	(0.1009)	(0.1005)	(0.0963)
Retired	0.0829	-0.0929	0.0930
	(0.0994)	(0.0989)	(0.0945)
Inactive	0.1841*	-0.0324	-0.0065
	(0.0857)	(0.0876)	(0.0814)
(Intercept)	3.1446***	3.2009***	2.5429***
	(0.2426)	(0.2431)	(0.2320)
Random effects			
	Std. dev.	Std. dev.	Std. dev.
Region	0.1429	0.1050	0.0588
Wave	0.0000	0.0219	0.0905
(Residual)	1.1756	1.1504	1.1157
AIC	7,837.644	7,354.656	7,503.981
BIC	7,936.296	7,452.453	7,602.458
Observations	2,448	2,328	2,423
Groups: Region	8	8	8
Groups: Wave	4	4	4

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Model predictions

Figure C-1. Expected support for two statements on gender relations (and 95% c.i.) by gender, age, and education

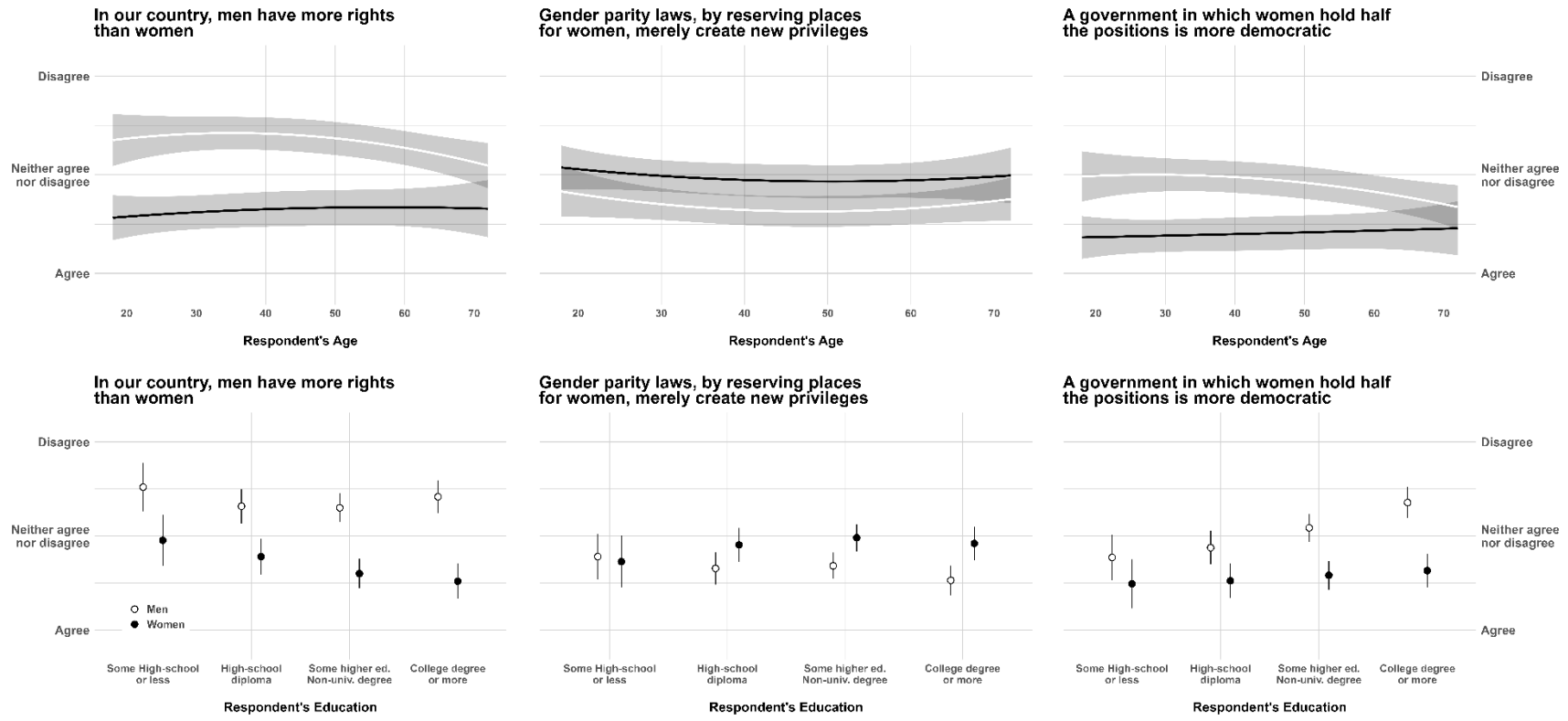


Figure C-1 presents a set of model predictions based on model results in Table C-3 (upper panels) and Table C-4 (lower panels).

Panels on the left and right columns match predictions in Figure 2 in the manuscript. Central panels are not included in the manuscript.

Appendix D: Descriptive statistics

Table D-1. Descriptive statistics

Variables	Valid Obs.	Mean (or %)	SD	Med	Min	Max
Dependent variables						
Modern Sexism Index	2,267	-0.011	1.246	0.038	-2.802	2.946
Men have more rights	2,448	2.937	1.234	3.000	1.000	5.000
Quotas are unfair	2,328	2.826	1.164	3.000	1.000	5.000
Parity is more democratic	2,423	2.780	1.154	3.000	1.000	5.000
Independent variables						
Female	2,667	49.9%	--	--	0.000	1.000
Age	2,667	43.382	16.194	43.000	18.000	89.000
Complete high-school	2,667	23.2%	--	--	0.000	1.000
Associate degree, some college	2,667	43.5%	--	--	0.000	1.000
College degree, or higher	2,667	23.8%	--	--	0.000	1.000
Public employee	2,667	17.2%	--	--	0.000	1.000
Unemployed	2,667	7.5%	--	--	0.000	1.000
Retired	2,667	10.7%	--	--	0.000	1.000
Inactive	2,667	13.3%	--	--	0.000	1.000
Waves						
March 2023	1,001	37.5%	--	--	0.000	1.000
May 2023	1,001	37.5%	--	--	0.000	1.000
May 2024	335	12.6%	--	--	0.000	1.000
November 2024	330	12.4%	--	--	0.000	1.000
Regions						
City of Buenos Aires (CABA)	200	7.5%	--	--	0.000	1.000
Greater Buenos Aires (GBA)	636	23.8%	--	--	0.000	1.000
Buenos Aires (PBA)	376	14.1%	--	--	0.000	1.000
Cuyo	211	7.9%	--	--	0.000	1.000
Center (Centro)	510	19.1%	--	--	0.000	1.000
North-West (NOA)	314	11.8%	--	--	0.000	1.000
North-East (NEA)	257	9.6%	--	--	0.000	1.000
Patagonia (Sur)	163	6.1%	--	--	0.000	1.000

References

Bates, Douglas, Martin **Mächler**, Ben **Bolker**, and Steve **Walker** (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software*, 67 (1), 1-48.

Gelman, Andrew, and Jennifer **Hill**. **2007.** *Data Analysis Using Regression and Multilevel/Hierarchical Models*. New York, NY: Cambridge University Press.

Gelman, Andrew, and Yu-Sung **Su**. 2016. "arm: Data Analysis Using Regression and Multilevel/Hierarchical Models." R package version 1.9-3. https://CRAN.R-project.org/package=arm (accessed April 1, 2025).

Swim, Janet K., Kathryn J. **Aikin**, Wayne S. **Hall**, and Barbara A. **Hunter**. 1995. Sexism and Racism: Old-Fashioned and Modern Prejudices. *Journal of Personality and Social Psychology* 68 (2): 199-214.

Swim, Janet K., and Laurie L. **Cohen**. 1997. Overt, Covert, and Subtle Sexism: A comparison between the attitudes toward women and modern sexism scales. *Psychology of Women Quarterly* 21 (1): 103-118.