

Supplementary Information for

Matriliney reverses gender disparities in inflammation and hypertension among the Mosuo of China

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Other supplementary materials for this manuscript include the following:

- Dataset S1

Supporting Information Text

Research Site and Population

The Mosuo number around 40,000 and are one of 27 distinct ethnic groups in Yunnan Province (1, 2). The Mosuo practice high-altitude agriculture, producing wheat, rice, potatoes, legumes, and vegetables; and animal husbandry, including pigs, chickens, cattle, sheep, and water buffalo. The matrilineal Mosuo have long intrigued social scientists because of their distinctive practice of “walking marriage”, in which men visit their reproductive partners at night, with both partners continuing to work and live in their natal households (3). Children resulting from these unions are raised in their maternal household and are supported by the capital and resources held communally by all household members. Fathers and husbands sometimes help with agricultural tasks (4), and may cohabit with their wife’s family for a time, but often remain members of and contribute productively to their matrilineal households.

Among the matrilineal population, women provide the majority of labor for agricultural and domestic tasks (5) and reproductive-aged sisters work together in cooperative child-rearing (4). Men are not as important to household economics, and though they may help during harvest and planting, contribute much less to daily agricultural production, instead carrying out irregular heavy labor and tasks that require absence from the household, such as house repair, herding, and wage labor (6). The division of duties is fluid—when household composition prevents adherence to normative divisions of labor, tasks are performed by whomever is available (6). Men and women are typically regarded as equals within many domains of the household, and grandmothers and maternal uncles are given the highest respect (7). Growing tourism in the region is creating new opportunities for households to earn cash, eroding certain ‘traditions’ (8); however, by and large, women continue to take on much of the day-to-day responsibilities of running a household.

The patrilineal Mosuo practice similar subsistence, with lesser reliance on cattle and heavier reliance on goats and sheep, and maintain similar cultural traditions as the matrilineal group (9). However, households in the patrilineal group follow a nuclear or stem family pattern with men as heads of household, husbands and wives co-residing, and one son inheriting the family’s land and herds (9). Although differences in kinship practices among the matrilineal and patrilineal Mosuo impact social processes including household organization, demography, marriage, and access to social support from kin, the two groups share most features of their culture, including a common language, religious customs, and agricultural subsistence practices (10). Their socio-ecologies are largely similar, with the exception of differences in terrain (more rugged in the patrilineal area) and a recent history of divergent economic development, due to tourism in the matrilineal area. Although overall prevalences of chronic inflammation and hypertension may be affected by these broader differences, greater development in the matrilineal area does not appear to increase the chronic health conditions under study (Table S2), and neither factor would impact the gender disparities described in this article.

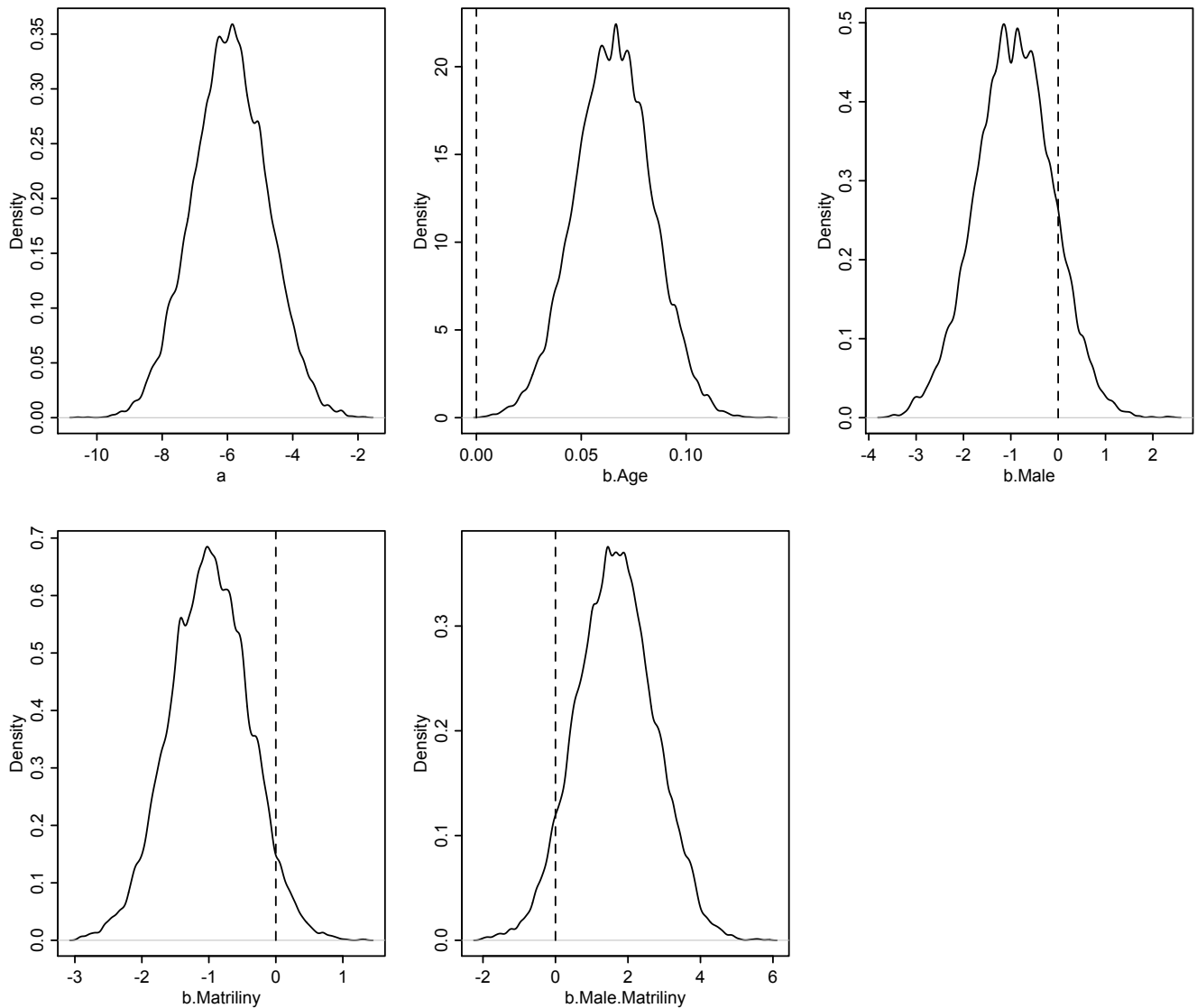


Fig. S1. Posterior probability densities for inflammation model. Panels show the probability that parameters fall at various possible values. The dashed line indicates the proportion of the probability density that falls on the opposite side of zero from the mean estimate for each parameter. These proportions were used to calculate the hypothesis tests reported in Tables 1 and S1. Probability densities for possible values of the intercept are labeled “a”; densities for different coefficients are labeled “b”.

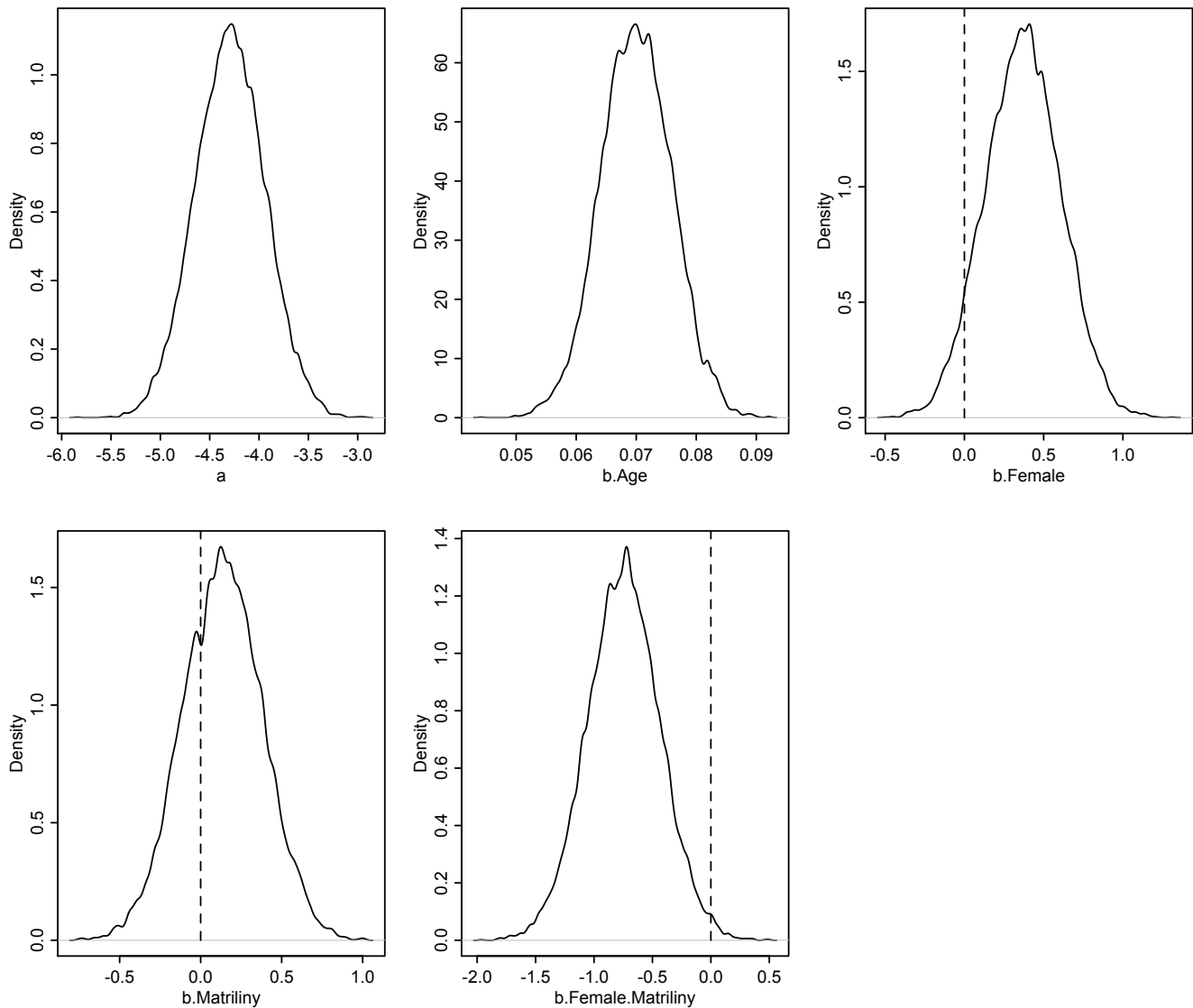


Fig. S2. Posterior probability densities for hypertension model. Panels show the probability that parameters fall at various possible values. The dashed line indicates the proportion of the probability density that falls on the opposite side of zero from the mean estimate for each parameter. These proportions were used to calculate the hypothesis tests reported in Tables 1 and S1. Probability densities for possible values of the intercept are labeled "a"; densities for different coefficients are labeled "b".

Table S1. Predictors of inflammation and hypertension, with controls for BMI

	Inflammation (<i>n</i> = 324)		Hypertension (<i>n</i> = 905)	
	Estimate (<i>Std Dev</i>)	Odds Ratio	Estimate (<i>Std Dev</i>)	Odds Ratio
(Intercept)	-6.94 (1.28)	< 0.01	-4.32 (0.36)	0.01
Age	0.07*** (0.02)	1.07	0.07*** (0.01)	1.07
Men [†]	-0.97 (0.82)	0.38	-0.28 (0.25)	0.76
Matriliney [‡]	-1.13** (0.60)	0.32	-0.53*** (0.20)	0.59
Men*Matriliney ^{†‡}	1.73* (1.09)	5.64	0.61** (0.32)	1.84
Underweight	-0.57 (0.79)	0.57	-0.73** (0.34)	0.48
Overweight/Obese	1.36*** (0.54)	3.90	0.58*** (0.16)	1.79

The probability that a positive coefficient is less than zero (or a negative coefficient is greater than zero) is * 0.10–0.05, ** 0.05–0.01, *** < 0.01.

[†]Reference is women; [‡]Reference is patriliney.

Table S2. Prevalence of chronic inflammation and hypertension.

	CRP 3-5 mg/L (n = 369)	Hypertension (n = 993)
<i>Entire Sample</i>	5.42	33.43
<i>Kinship System</i>		
Matriliny	4.52	32.71
Patriliny	6.47	34.47
<i>Gender</i>		
Women	5.74	33.76
Men	4.80	32.89
<i>Head of Household</i>		
No	7.65	31.43
Yes	2.34	36.89
<i>Age Cohort</i>		
16-19	0.00	4.35
20-24	0.00	7.89
25-29	0.00	7.50
30-34	4.00	4.23
35-39	0.00	15.73
40-44	1.96	22.03
45-49	6.56	35.26
50-54	2.04	33.81
55-59	4.35	42.86
60-64	4.88	50.52
65-69	17.86	56.25
70+	17.24	71.58

SI Dataset S1 (Dataset_S1.csv)

De-identified data used in analyses.

References

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