

Regional differences in mating strategies



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Previous studies have linked regional variation in sociosexual orientation to regional differences in various measures of health^{1,2,3}, scarcity of female mates¹, and wealth¹. These variables may be inter-related, so it is unclear what best predicts sociosexual orientation. To address this issue, we investigated regional variation in the sociosexual orientation of over 4,000 American men and women from 50 US states and Washington DC, using factor analysis to derive orthogonal health, scarcity of female mates, and wealth factors.

Regional Predictors

Participants came from 51 US regions (as identified by IP address). Previously identified correlates of sociosexual orientation¹ were obtained from publicly available databases^{5,6}. Factor analysis identified three orthogonal factors: health, scarcity of female mates (SoFM) and wealth.

Regional Variables	Health	SoFM	Wealth
Infant mortality	0.853	-0.18	-0.006
Low birth weight	0.846	-0.251	0.161
Teenage pregnancy	0.869	0.369	-0.006
Life expectancy	-0.934	-0.038	0.082
Children in poverty	0.863	-0.052	-0.279
Operational Sex Ratio	-0.338	0.804	-0.134
Fertility rate	0.087	0.893	0.055
♀ median age at 1 st marriage	-0.141	-0.812	0.434
GDP per capita	-0.024	-0.127	0.949
Human Development Index	-0.732	-0.337	0.55

Measuring Sociosexual Orientation

Participants completed the revised Sociosexual Orientation Inventory (SOI-R)⁴ online, which assesses participants' openness to uncommitted sexual relationships. It has three subscales measuring behaviour, attitude and desire. Higher scores indicate greater openness to uncommitted sexual relationships.

Participants

A total of 4453 heterosexual participants between 15 and 50 years of age participated in the online study.

Men: $N = 1244$, $M_{age} = 25.9$ years, $SD_{age} = 7.59$

Women: $N = 3209$, $M_{age} = 23.4$ years, $SD_{age} = 5.94$

Analyses

SOI-R scores were analysed using multilevel modelling with individuals grouped by region and a random intercept by region. The health, scarcity of female mates (SoFM), and wealth factors were entered at the region level, and age (centered at the grand mean) and sex (0 = female, 1 = male) were entered at the individual level.

Initial analyses with interactions between sex and the three regional factors entered at the individual level revealed no significant interactions, so these interactions were dropped from the model reported in the table below.

Predictor	β	SE	z	p
Age	0.167	0.018	9.28	<.001
Sex (0 = ♀, 1 = ♂)	4.045	0.260	15.6	<.001
Health Factor	-0.211	0.167	-1.26	0.213
SoFM Factor	-0.696	0.177	-3.94	<.001
Wealth Factor	0.272	0.206	1.32	0.190

In our sample of men and women from the United States, the scarcity of female mates (SoFM) factor was negatively correlated with openness to uncommitted sexual relationships. In other words, both men and women in regions with greater scarcity of female mates had lower SOI-R scores. By contrast, neither the health nor wealth factors predicted men's or women's SOI-R. These results complement previous findings linking sociosexual orientation to operational sex ratio and extend this research to single-country sample.

