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A First Look at Gender Inequality as a Societal Risk Factor for Dating Violence

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Abstract

Introduction—One of ten U.S. high school students is a victim of adolescent dating violence (ADV). Understanding ADV risk factors guides prevention efforts; however, research examining community- and societal-level risk factors is scant. Societal gender inequality is a known risk factor for violence against women, but has yet to be explored in relation to ADV. This study aims to determine whether the Gender Inequality Index (GII) correlates with levels of physical and sexual ADV victimization across U.S. states.

Methods—State-representative prevalence rates of self-reported physical and sexual ADV victimization were obtained from the 2013 Youth Risk Behavior Survey. The state GII includes five indicators: (1) maternal mortality; (2) adolescent birth rate; (3) government representation; (4) educational attainment; and (5) labor force participation. Pearson correlation coefficients determined the association between physical and sexual ADV victimization, the GII, and GII indicators. Analyses were conducted in August 2014.

Results—Among U.S. states, the prevalence of physical ADV victimization in 2013 ranged from 7.0% to 14.8%, and the prevalence of sexual ADV victimization ranged from 7.8% to 13.8%. The GII was significantly associated with the state prevalence of female physical ADV victimization ($r=0.48$, $p<0.01$) but not female sexual ADV victimization. Neither physical nor sexual male ADV victimization was associated with the GII.

Conclusions—This exploratory study suggests that gender inequality may be a societal-level risk factor for female physical ADV victimization. As ADV prevention strategies are implemented at the state level, further research examining the effect of gender inequality on ADV is needed.

Introduction

CDC estimates that approximately one of ten high school students in the U.S. has been a victim of physical or sexual adolescent dating violence (ADV) in the past year.¹ Involvement in ADV is associated with myriad negative health outcomes among adolescents, including

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an increased risk for mental health issues,²⁻⁷ substance abuse,^{6, 7} risky sexual behaviors,^{6, 8} and other types of youth violence, including suicide attempts.^{6, 7, 9}

In order to inform comprehensive ADV prevention strategies, the public health approach advises identifying risk factors at multiple levels of the social ecologic model. Although numerous ADV risk factors at the individual level have been confirmed through longitudinal studies, there is a paucity of research examining community- and societal-level risk factors for ADV.¹⁰ The few existing studies are limited in scale¹¹⁻¹⁴ and often employ participants' self-reported data to measure characteristics of the contextual environment,^{11, 12, 14} likely inducing same-source bias. Measuring community or societal risk factors with objective, macro-level data can provide a more precise understanding of the contextual environment that contributes to ADV.

Societal-level gender inequality is of particular interest, as it has historically been linked to higher rates of violence against women.¹⁵ The association between gender inequality and violence against women is based on feminist theory, which purports that gender-based inequities in political, economic, or social resources perpetuate male dominance and other traditional gender roles.¹⁶⁻¹⁸ However, gender inequality has not yet been empirically supported as a risk factor for either physical or sexual ADV.^{10, 19} More often, studies that demonstrate associations between individual-level gender-based attitudes and ADV²⁰⁻²⁵ have been used to support community-level efforts to address gender inequality. The question, therefore, remains as to whether societal-level interventions to address gender inequality, including programming and policies that foster equitable access to resources, have the potential to prevent ADV.

To address this gap, the current study employs a methodology used in previous intimate partner violence studies^{26, 27} to examine whether state-level gender inequality correlates with U.S. state prevalence rates of physical and sexual ADV victimization among high school students. In doing so, this study aims to determine if state-level gender inequality is a risk factor for physical and sexual ADV victimization. ADV prevalence data were obtained from the 2013 Youth Risk Behavior Survey (YRBS)¹ and gender inequality was operationalized using the Gender Inequality Index (GII), as described in the 2013 Human Development Report of the UN Development Program (UNDP).²⁸ Currently, the UNDP reports GII measures only at the country level, so the GII was adapted for the U.S. states for this study. The GII measures gender-based disadvantage based on five indicators:

1. maternal mortality rate;
2. adolescent birth rate;
3. government representation;
4. educational attainment; and
5. labor force participation.

These indicators comprise three dimensions of gender-based inequality: reproductive health, empowerment, and labor market participation. These dimensions draw from the theoretic framework for gender-based inequities proposed by Bradley and Khor.¹⁸

This study builds upon the methods of the two previous intimate partner violence studies^{26, 27} in several ways. As noted, the GII includes a dimension of reproductive health, thereby expanding measures of gender inequality that rely solely on political and economic indicators. In addition, this study assesses physical and sexual ADV victimization rates for both male and female adolescents, whereas the previous studies measured only violence perpetrated against women. The 2013 YRBS also includes a substantially larger sample size than the data sources used in previous studies, resulting in more-reliable state prevalence rates. Finally, owing to increased data accessibility, this study makes use of recent ADV data and creates a gender inequality measure from nearly the same time frame. Using this unique approach, this study hopes to inform ADV prevention efforts by providing insight into the societal context for varying levels of ADV across U.S. states.

Methods

This study utilized individual U.S. states as the unit of analysis. This methodology has been used previously^{26, 27} and is considered appropriate given each state's unique political, economic, and cultural profile. To measure state prevalence rates of physical and sexual ADV victimization, we used data from CDC's 2013 YRBS.¹ Details of the survey methodology are described else-where.²⁹ Briefly, the YRBS uses a multistage cluster sampling design and weighting procedures to obtain national and state representative prevalence data from ninth- through 12th-grade high school students. In 2013, the student response rate was 88% (N=13,583).¹ Physical ADV victimization was measured by one survey item: *During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon)*. Sexual ADV victimization was also measured by one survey item: *During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to? (Count such things as kissing, touching, or being physically forced to have sexual intercourse)*. Responses for each item were dichotomized to indicate any previous physical or sexual ADV victimization. Of note, only students who reported dating in the previous year were asked these questions. Percentage rates thereby account for potential state differences in numbers of dating students.

Data were not available for several states, including three states that did not participate in the 2013 YRBS, five states that lacked state-representative data, and others that omitted ADV survey items. Final sample sizes for physical and sexual ADV prevalence were 38 and 31, respectively.^{1, 29}

Measures

Gender inequality was measured by each state's calculated GII score. The final calculated value of the GII ranges from 0.0 (indicating complete gender equality) to 1.0 (indicating the highest level of gender inequality possible). The procedures for calculating the GII are described elsewhere.²⁸ Because measures of the GII are only available at the country level, it was necessary to obtain comparable state-level data measuring each of the five indicators. The data sources used in this study are described below.

The maternal mortality rate is the number of maternal deaths per 100,000 live births. In the U.S., a new standard death certificate was introduced in 2003, which included a checkbox inquiring about the pregnancy status of the decedent.³⁰ This new format caused increased reporting of maternal deaths, but adoption of the revised certificate has been variable among states. As such, state-level maternal mortality rates differ regarding their validity. Given this limitation, the authors used the overall U.S. maternal mortality rate reported in the 2013 Human Development Report (rate=28.0)²⁸ as a constant for all states.

The adolescent birth rate is the number of births to women aged 15–19 years per 1,000 women in that age group. State-level data were obtained from the National Vital Statistics System for 2012, the most recent year available.³¹

In the UNDP's GII calculation, country-level male and female government representation data were obtained from the Inter-Parliamentary Union. For this study, we calculated the percentage of male and female state legislators in each state in 2012.³²

In the UNDP's GII calculation, secondary-level educational attainment data were obtained from various sources and reported as a percentage for each gender. For this study, we calculated the percentage of men and women aged 25 years that reported attainment of a high school diploma or greater in each state. Data were obtained from the 3-year 2010–2012 estimate of the American Community Survey.³³

Finally, in the UNDP's GII calculation, labor force participation data were obtained from various sources and reported as a percentage for each gender. For this study, we calculated the percentage of men and women aged 20–64 years in the non-institutionalized population who are participating in the civilian labor force in each state, including both the “employed” and “unemployed” (definitions are provided at www.bls.gov/dolfaq/bls_ques23.htm). Data were obtained from the 3-year 2010–2012 estimate of the American Community Survey.³³

Statistical Analysis

All state-level GIIs were calculated as described in the UNDP report.²⁸ ADV and GII data were then imported into SPSS, version 18, for further analysis. Pearson correlation coefficients measured the associations between physical ADV victimization, sexual ADV victimization, the GII, and the indicators of the GII, except maternal mortality, which was a constant. When conducting correlation analyses with the individual indicators, the male/female ratio (rather than the female rate alone) was used for both the educational attainment and labor force participation indicators in order to control for the overall rate of those indicators in each state. Ordinary least squares regression was used to model the relationship between the GII and ADV victimization. Analyses were conducted in August 2014. This study was exempted from human subjects review by Georgia State University.

Results

The state prevalence rates of physical and sexual ADV victimization for all students, female students, and male students are presented in Table 1. Among U.S. high school students who dated or went out with someone during the 12 months prior to the survey, 10.3% reported

physical ADV victimization and 10.4% reported sexual ADV victimization.¹ Female students were significantly more likely than male students to report physical ADV victimization in 25 of 38 reporting states and sexual ADV victimization in all but one reporting state. The mean state-level prevalence of physical and sexual ADV victimization was 9.9% (SD=1.7%) and 10.6% (SD=1.2%), respectively. States showed considerable variability in ADV prevalence; Louisiana had the highest prevalence of physical ADV victimization (14.8%), whereas Utah had the lowest (7.0%). For sexual ADV victimization, Hawaii had the highest prevalence (13.8%) and Kansas had the lowest (7.8%).

The GII for each state is shown in Table 2. States are ranked from lowest (indicating less gender inequality) to highest (indicating greater gender inequality). Among the states, Vermont reported the least gender inequality (0.18), whereas South Carolina, Louisiana, and Oklahoma reported the greatest gender inequality (0.33). The mean GII was 0.26 (SD=0.04).

In order to compare data sources used in this study with those used by the UNDP, the GII for the overall U.S. was calculated. As shown in Table 2, the GII for the U.S. using the data sources for this study was 0.26. The GII reported in the 2013 Human Development Report for the U.S. was also 0.26,²⁸ indicating excellent comparability between the differing data sets.

Table 3 presents the correlation matrix for prevalence rates of physical and sexual ADV victimization (total, female, and male); the GII; and the GII indicators. The GII was significantly correlated with female physical ADV victimization ($r=0.477$, $p=0.002$). The GII was not significantly correlated with male physical ADV victimization, or with female or male sexual ADV victimization.

Given the significant association between female physical ADV victimization and the GII, linear regression was conducted to model the relationship between the two variables. The unstandardized coefficients of the model were $\beta_0=0.063$ (SE=0.017) and $\beta_1=0.204$ (SE=0.063), with a p -value of 0.002. The adjusted r^2 was 0.206, indicating that the GII explains 20.6% of the state-by-state variability in female physical ADV victimization prevalence rates. Prior to regression, it was determined that all assumptions for linear regression (i.e., normality, linearity, and homoscedasticity) were met.

In addition, state measures for both female physical ADV victimization and the GII were mapped to illustrate any regional patterns in the state-by-state variation of either measure. Figure 1 depicts the U.S. state maps of female physical ADV victimization prevalence rates and GII scores. As shown, states with higher rates of female physical ADV victimization are concentrated in the southern and southeastern U.S. regions. Similarly, states with higher GII scores (i.e., greater gender inequality) are concentrated in the southern and southeastern regions. States with lower GII scores (i.e., lower gender inequality) tend to be located in the northeast, Midwest, or on the western coast.

To determine whether the indicators of the GII were associated with total, female, or male rates of physical and sexual ADV victimization, Pearson correlation coefficients were again obtained (Table 3). Maternal mortality rate was not included in these analyses because all states were assigned the same value for maternal mortality, as described previously.

Adolescent birth rate was significantly associated with both total ($r=0.343$, $p=0.035$) and female physical ADV victimization ($r=0.497$, $p=0.002$). In addition, the male/female educational attainment ratio was significantly associated with total ($r=0.462$, $p=0.009$) and female sexual ADV victimization ($r=0.602$, $p<0.001$). Several indicators were significantly correlated with each other, particularly the adolescent birth rate.

Discussion

By adapting procedures outlined in UNDP's 2013 Human Development Report, this study used a state measure of the GII in order to determine whether state-level gender inequality is associated with prevalence rates of ADV victimization across many U.S. states. According to 2013 YRBS data, state-by-state variation in both physical and sexual ADV victimization is substantial, with the prevalence of physical ADV ranging from 7.0% to 14.8% and the prevalence of sexual ADV ranging 7.8% to 13.8%. State measures of the GII are also varied, with gender inequality being lowest in Vermont (GII=0.18) and highest in South Carolina, Louisiana, and Oklahoma (GII=0.33).

Correlation analyses indicate that states with higher scores on the GII (i.e., greater gender inequality) have higher levels of physical ADV victimization among female adolescents. The linear regression model implies that a state with complete gender equality (GII=0) would have a female physical ADV victimization prevalence of 6.3%, and a state with complete gender inequality (GII=1.0) would have a prevalence of 26.7%. This finding adds to previous research identifying gender inequality as a societal risk factor for violence against women^{15, 26, 27} and suggests that gender inequality may have implications for physical violence against female adolescents as well. On the other hand, this study also found that gender inequality is not significantly associated with sexual ADV victimization among female adolescents. This finding contrasts with an international study of adult women that found an association between country-level incidence rates of sexual violence and the political/social status of women in each country.³⁴ A possible explanation is that sexual violence among adolescents may be more influenced by proximal risk factors; a systematic review found 35 individual- and interpersonal-level risk factors for sexual ADV, but only two community-level risk factors, both with mixed effects.^{10, 19} Additional research is needed to elucidate the relationship, or lack thereof, between gender inequality and sexual ADV.

Neither the prevalence of male physical nor sexual ADV victimization was associated with the GII. With regard to physical ADV, this finding suggests, somewhat intuitively, that a context of gender inequality may have a differential effect on male and female victimization.

Among the individual indicators of the GII, adolescent birth rate was significantly associated with both total and female physical ADV victimization. This finding indicates that reproductive health may be an especially important dimension of state-level gender inequality; previous studies have measured gender inequality using only political and economic indicators of inequality.^{26, 27, 34} This study also found that states with higher male/female educational attainment ratios are more likely to have higher rates of both total and female sexual ADV victimization. Although this finding is consistent with previous

research among adult women,²⁶ the implications for ensuring educational access for female adolescents warrant further exploration.

This study provides potential implications for current ADV prevention efforts and further research. The association between the state-level GII and female physical ADV victimization aligns with studies that have found associations between individual gender-based attitudes and ADV.^{20–25} Future research could examine whether states with greater gender inequality provide the context in which these traditional gender roles can be maintained. If such a link exists, evidence-based programs that address gender stereotyping, such as Safe Dates,³⁵ Fourth R,³⁶ and Coaching Boys into Men,³⁷ may be especially effective in preventing female physical ADV victimization in these states. At a broader level, this study also suggests that programs using strategies to address gender-based inequities at the community or societal level, such as CDC's DELTA FOCUS program,³⁸ may be effective in preventing ADV. Recent policy initiatives to foster gender equality³⁹ may also present a unique opportunity for ADV prevention effectiveness research. Importantly, however, the null findings around female sexual ADV victimization and male victimization is a reminder that prevention efforts must consider contextual risk factors beyond gender inequality in order to comprehensively address ADV.¹⁹

Limitations

These findings are subject to limitations. First, although the YRBS provides rich data examining youth risk behaviors, it is administered to only those youth attending school and thus lacks important information regarding youth who have dropped out or are frequently absent. The data are also self-reported and may be subject to reporting bias, especially for socially undesirable behaviors, such as ADV.⁴⁰ Further, only one survey item was used to measure each type of ADV, potentially resulting in more-conservative estimates of ADV than those obtained with multidimensional measures. In addition, several states were not included in analyses because of insufficient YRBS participation or omission of ADV survey items; null results for sexual ADV victimization in particular may be affected by unavailable data. This study is also limited by the absence of statistical control for potential confounding variables (e.g., state-level economic factors) due to low sample size and limited statistical power.⁴¹ Finally, use of a constant maternal mortality rate for all states in this study limits accuracy of the GII.

Conclusions

Despite these limitations, this is the first known study to apply the GII to examine variations in state-level physical and sexual ADV victimization among U.S. high school students. Future research can build upon this approach by developing more-sensitive measures of gender inequality and exploring the association between gender inequality and ADV at more-proximal levels, such as counties or cities. Doing so may uncover important nuances that were undetected in this study. In addition, other macro-level variables, including poverty and urbanization, should be examined in relation to ADV. Understanding the distal levels of influence on dating behavior will help future ADV prevention programming to be both more comprehensive and effective.

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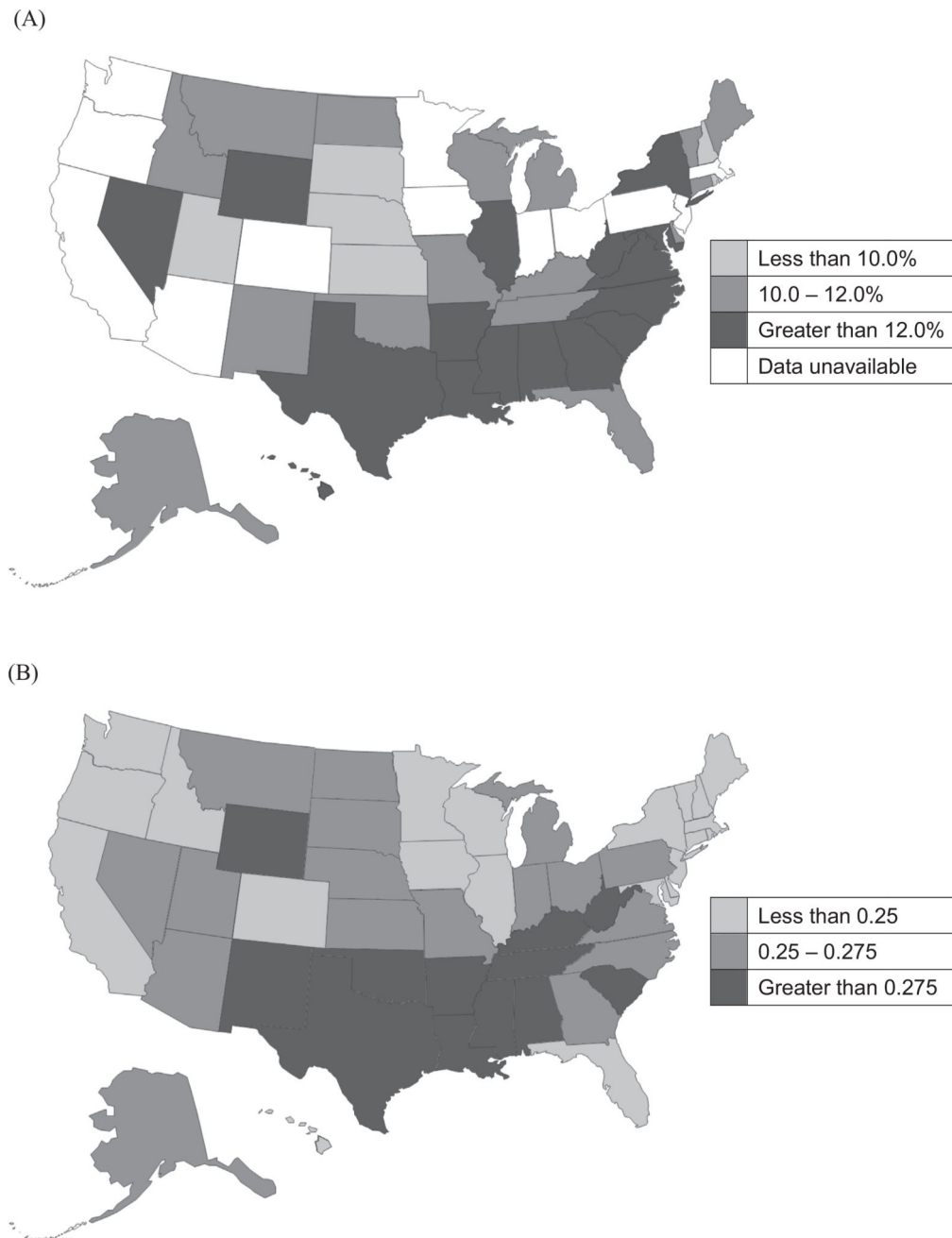


Figure 1. U.S. maps of female physical ADV victimization prevalence rates and GII scores

(A) Female physical ADV victimization prevalence rates, by state

(B) GII scores, by state.

ADV, adolescent dating violence; GII, Gender Inequality Index.

Percentage of High School Students Reporting Physical and Sexual ADV Victimization by U.S. State, 2013

Table 1

State	Physical ADV			Sexual ADV		
	Total %	F%	M%	Total %	F%	M%
U.S.	10.3	13.0	7.4	10.4	14.4	6.2
Alabama	11.6	12.9	10.2	10.6	13.7	7.2
Alaska	9.1	11.3	6.2	11.4	16.6	5.7
Arizona	—	—	—	—	—	—
Arkansas	13.8	14.8	11.6	12.8	15.2	9.7
California	—	—	—	—	—	—
Colorado	—	—	—	—	—	—
Connecticut	9.0	10.1	7.9	11.1	15.5	7.3
Delaware	8.9	10.7	6.8	10.4	12.3	8.4
Florida	9.9	10.6	9.1	10.5	13.1	7.7
Georgia	12.4	12.9	11.6	—	—	—
Hawaii	11.1	12.3	8.8	13.8	18.4	8.0
Idaho	9.1	11.8	6.4	—	—	—
Illinois	11.1	13.7	8.5	11.6	16.7	6.5
Indiana	—	—	—	—	—	—
Iowa	—	—	—	—	—	—
Kansas	7.8	9.4	5.9	7.8	11.6	4.0
Kentucky	9.8	11.8	7.6	9.8	13.1	6.4
Louisiana	14.8	16.1	12.6	—	—	—
Maine	9.0	11.1	6.8	—	—	—
Maryland	11.1	12.0	9.7	11.7	13.8	9.0
Massachusetts	—	—	—	—	—	—
Michigan	8.8	11.0	6.6	9.8	14.1	5.5
Minnesota	—	—	—	—	—	—
Mississippi	10.4	13.4	7.3	10.4	12.7	8.3
Missouri	9.6	11.6	7.4	—	—	—

State	Physical ADV			Sexual ADV		
	Total %	F%	M%	Total %	F%	M%
Montana	8.8	11.0	6.6	11.1	15.6	6.4
Nebraska	7.6	10.0	5.3	10.1	15.7	4.7
Nevada	10.9	12.4	9.1	12.2	17.2	7.2
New Hampshire	7.4	9.1	5.8	10.3	14.8	5.0
New Jersey	—	—	—	—	—	—
New Mexico	9.4	11.1	7.7	10.0	12.6	7.3
New York	12.1	12.4	11.7	11.8	14.2	9.3
North Carolina	9.4	12.2	6.2	9.8	14.5	5.1
North Dakota	9.7	11.9	7.3	—	—	—
Ohio	—	—	—	9.7	13.4	6.1
Oklahoma	8.4	11.3	5.7	9.5	13.9	5.5
Oregon	—	—	—	—	—	—
Pennsylvania	—	—	—	—	—	—
Rhode Island	8.4	9.4	7.3	8.8	12.0	5.2
South Carolina	10.4	13.1	7.5	10.4	13.7	7.0
South Dakota	7.8	9.6	6.0	10.5	15.8	5.3
Tennessee	9.6	10.8	8.4	10.8	14.5	6.9
Texas	9.9	12.5	7.4	11.1	14.5	7.9
Utah	7.0	7.7	6.1	10.8	15.1	6.4
Vermont	10.2	11.4	9.0	—	—	—
Virginia	11.0	13.5	8.1	—	—	—
Washington	—	—	—	—	—	—
West Virginia	10.8	13.8	8.0	8.7	13.4	4.2
Wisconsin	8.5	10.3	6.7	9.6	15.7	4.0
Wyoming	10.3	12.6	7.4	11.5	15.7	6.7

Note: Boldface indicates females significantly more likely to report victimization than males ($p < 0.05$). Data are obtained from the 2013 Youth Risk Behavior Survey. These data are published elsewhere¹ but are provided here for reference.

—, no data available; ADV, adolescent dating violence; F, female; M, male.

Table 2

Gender Inequality Index by U.S. State, Ranked From Lowest Level of Gender Inequality to Highest

Rank	State	GII
	U.S.	0.26
1	Vermont	0.18
2	Connecticut	0.19
3	New Hampshire	0.20
4	Massachusetts	0.20
5	Minnesota	0.20
6	New Jersey	0.20
7	Maine	0.21
8	Colorado	0.22
9	Maryland	0.22
10	Rhode Island	0.22
11	Washington	0.23
12	Oregon	0.23
13	Wisconsin	0.23
14	New York	0.23
15	Hawaii	0.23
16	Illinois	0.24
17	Delaware	0.24
18	California	0.24
19	Iowa	0.25
20	Florida	0.25
21	Idaho	0.25
22	Nebraska	0.25
23	Montana	0.25
24	Michigan	0.26
25	Virginia	0.26
26	Arizona	0.26
27	Ohio	0.26
28	Pennsylvania	0.26
29	Kansas	0.26
30	North Carolina	0.26
31	Missouri	0.26
32	Nevada	0.27
33	Alaska	0.27
34	Georgia	0.27
35	Utah	0.27
36	North Dakota	0.27

Rank	State	GII
37	Indiana	0.27
38	South Dakota	0.27
39	New Mexico	0.29
40	Tennessee	0.30
41	Arkansas	0.30
42	Wyoming	0.30
43	Kentucky	0.30
44	Texas	0.30
45	West Virginia	0.31
46	Mississippi	0.31
47	Alabama	0.32
48	South Carolina	0.33
49	Louisiana	0.33
50	Oklahoma	0.33

Note: The GII was calculated using procedures adapted from the 2013 Human Development Report.

GII, Gender Inequality Index.

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Table 3
Correlation Matrix of Physical and Sexual ADV Victimization, the GII, and the GII Indicators

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Total physical ADV victimization	<i>r</i>	—								
	<i>p</i> -value									
(2) Female physical ADV victimization	<i>r</i>	0.900**	—							
	<i>p</i> -value	< 0.001								
(3) Male physical ADV victimization	<i>r</i>	0.917**	0.664**	—						
	<i>p</i> -value	< 0.001	< 0.001							
(4) Total sexual ADV victimization	<i>r</i>	0.573**	0.392*	0.557**	—					
	<i>p</i> -value	0.001	0.032	0.001						
(5) Female sexual ADV victimization	<i>r</i>	0.130	0.120	0.055	0.715**	—				
	<i>p</i> -value	0.494	0.526	0.773	< 0.001					
(6) Male sexual ADV victimization	<i>r</i>	0.686**	0.459*	0.739**	0.707**	0.034	—			
	<i>p</i> -value	< 0.001	0.011	< 0.001	< 0.001	0.857				
(7) GII	<i>r</i>	0.315	0.477**	0.122	-0.134	-0.203	0.039	—		
	<i>p</i> -value	0.054	0.002	0.465	0.472	0.273	0.835			
(8) Adolescent birth rate	<i>r</i>	0.343*	0.497**	0.151	-0.080	-0.196	0.106	0.903**	—	
	<i>p</i> -value	0.035	0.002	0.367	0.670	0.290	0.569	< 0.001		
(9) Percent female government representation	<i>r</i>	-0.138	-0.266	-0.018	0.286	0.268	0.107	-0.780**	-0.475**	—
	<i>p</i> -value	0.409	0.106	0.913	0.119	0.145	0.565	< 0.001	< 0.001	
(10) Male/female ratio educational attainment	<i>r</i>	-0.191	-0.295	-0.118	0.462**	0.602**	0.021	-0.360*	-0.352*	0.326*
	<i>p</i> -value	0.251	0.072	0.482	0.009	< 0.001	0.911	0.010	0.012	0.021
(11) Male/female ratio, labor force participation	<i>r</i>	0.072	0.090	0.044	0.150	0.068	0.164	0.397**	0.386**	-0.176
	<i>p</i> -value	0.666	0.593	0.795	0.420	0.715	0.378	0.004	0.006	0.220
										0.491

Note: ADV data were obtained from the 2013 Youth Risk Behavior Survey. The GII was calculated using procedures adapted from the 2013 Human Development Report. Maternal mortality is not included in the table because it was treated as a constant in this study.

* Correlation is significant at the 0.05 level (two-tailed).

** Correlation is significant at the 0.01 level (two-tailed).
ADY, adolescent dating violence; GII, Gender Inequality Index.

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