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The Widening Gender Gap in Marijuana Use Prevalence in the U.S. during a Period of Economic Change, 2002-2014

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Table S1. Sample characteristics overall and by gender, 2002-2014

	Overall N= 492,831		**Men N=229,786 48.2% (SE=0.12)**		**Women N=263,045 51.8% (SE=0.12)**	
	N	Prevalence[a] % (SE)	N	Prevalence[a] % (SE)	N	Prevalence[a] % (SE)
Race/ethnicity						
White	318,422	68.4 (0.16)	149,950	68.6 (0.20)	168,472	68.2 (0.19)
Black	59,914	11.5 (0.12)	25,719	10.6 (0.13)	34,195	12.2 (0.15)
Hispanic	74,133	13.6 (0.11)	35,015	14.4 (0.16)	39,118	12.9 (0.13)
Other	40,362	6.5 (0.08)	19,102	6.4 (0.11)	21,260	6.7 (0.10)
Age						
18-25	235,045	14.8 (0.08)	111,835	15.4 (0.10)	123,210	14.2 (0.09)
26-34	75,614	16.0 (0.08)	34,959	16.4 (0.11)	40,655	15.5 (0.11)
35-49	106,154	28.2 (0.12)	48,706	28.7 (0.14)	57,448	27.8 (0.16)
50-64	46,600	24.2 (0.14)	21,345	24.2 (0.21)	25,255	24.1 (0.18)
65+	29,418	16.9 (0.12)	12,941	15.3 (0.16)	16,477	18.5 (0.16)
Marital						
Married	184,573	54.4 (0.15)	82,824	56.6 (0.17)	101,749	52.4 (0.18)

Previously married	58,627	19.7 (0.11)	20,584	14.5 (0.13)	38,043	24.5 (0.15)
Never married	249,631	25.9 (0.11)	126,378	28.9 (0.13)	123,253	23.1 (0.13)
Income						
$0-19,999	125,846	18.8 (0.12)	52,684	16.1 (0.14)	73,162	21.2 (0.17)
$20,000-49,999	174,722	33.9 (0.13)	81,279	33.3 (0.16)	93,443	34.5 (0.18)
$50,000-74,999	79,400	17.6 (0.11)	38,187	18.0 (0.16)	41,213	17.2 (0.14)
$75,000+	112,863	29.8 (0.18)	57,636	32.6 (0.22)	55,227	27.1 (0.20)
Education						
<high school	83,170	15.5 (0.10)	43,153	16.4 (0.13)	40,017	14.7 (0.12)
High school	161,401	30.7 (0.14)	77,801	30.6 (0.17)	83,600	30.8 (0.17)
>high school	248,260	53.8 (0.14)	108,832	53.0 (0.20)	139,428	54.5 (0.18)

[a] adjusted for complex survey design

Table S2. Piecewise regression for past-year marijuana use, NSDUH 2002-2014, to identify potential change points (knots)[b]

	Unadjusted			Adjusted for covariates[a]		
Knot	**β1 (95% confidence interval)**	**β2 (95% confidence interval)**	**R^2**	**β1 (95% confidence interval)**	**β2 (95% confidence interval)**	**R^2**
2003	-0.109 (-0.171, -0.046)	0.138 (0.075, 0.202)	0.00097	-0.129 (-0.191, -0.067)	0.167 (0.104, 0.230)	0.10719
2004	-0.057 (-0.087, -0.028)	0.091 (0.059, 0.122)	0.00103	-0.067 (-0.095, -0.038)	0.108 (0.078, 0.138)	0.10725
2005	-0.035 (-0.055, -0.016)	0.073 (0.051, 0.095)	0.00109	-0.040 (-0.058, -0.022)	0.086 (0.066, 0.107)	0.10731
2006	-0.022 (-0.036, -0.008)	0.064 (0.047, 0.082)	0.00113	-0.024 (-0.038, -0.011)	0.077 (0.060, 0.094)	0.10736
2007	**-0.012 (-0.023, -0.001)**	**0.059 (0.044, 0.074)**	**0.00115**	**-0.012 (-0.023, -0.001)**	**0.070 (0.055, 0.086)**	**0.10739[c]**
2008	-0.003 (-0.012, 0.006)	0.054 (0.040, 0.068)	0.00113	-0.002 (-0.011, 0.007)	0.066 (0.051, 0.081)	0.10737
2009	0.006 (-0.002, 0.013)	0.048 (0.034, 0.063)	0.00107	0.008 (-0.000, 0.015)	0.061 (0.046, 0.076)	0.10732
2010	0.011 (0.004, 0.017)	0.050 (0.033, 0.066)	0.00105	0.013 (0.006, 0.020)	0.064 (0.048, 0.083)	0.10730
2011	0.014 (0.008, 0.020)	0.059 (0.039, 0.079)	0.00104	0.018 (0.012, 0.024)	0.075 (0.053, 0.098)	0.10729
2012	0.018 (0.013, 0.023)	0.071 (0.049, 0.098)	0.00100	0.023 (0.018, 0.028)	0.092 (0.062, 0.122)	0.10723
2013	0.021 (0.017, 0.026)	0.110 (0.067, 0.153)	0.00096	0.027 (0.022, 0.032)	0.143 (0.092, 0.193)	0.10718

[a] Covariates include gender, age, race/ethnicity, marital status, education, and income.
[b] For each potential knot year (2003-2013), piecewise regression modeled marijuana use as a function of two continuous time variables. One time variable indicated interview year, while the second time variable was assigned a value of 0 from 2002 through the knot year, and indicated interview year from the knot year until 2014. This model allows for two different slopes, one until the knot year, and a second until 2014.
[c] The best fitting change point was determined based on the model with the highest R-squared value.

Table S3: Differential trends in prevalence of past-year marijuana use by gender, by income, NSDUH 2007-2014 (N=307,935)[a]

		Unadjusted for covariates		
Household income	**Gender**	**Change in prevalence**[b] (SE), p-value	**Difference in change in prevalence men vs. women**[c] (SE), p-value	**Differences by income level**[d] (SE), p-value
$0-19,999	*Men*	7.29% (1.22), ≤0.0001	4.21% (1.30), 0.0015	3.67% (1.52), 0.017
	Women	3.08% (0.73), ≤0.0001	Reference	
$20,000-49,999	*Men*	4.56% (0.75), ≤0.0001	2.33% (0.91), 0.011	1.79% (1.22), 0.15
	Women	2.22% (0.44), ≤0.0001	Reference	
$50,000-74,999	*Men*	2.89% (0.87), 0.001	0.46% (1.18), 0.70	-0.09% (1.34), 0.95
	Women	2.43% (0.63), 0.0002	Reference	
$75,000+	*Men*	3.05% (0.59), ≤0.0001	0.55% (0.77), 0.48	reference
	Women	2.51% (0.51), ≤0.0001	Reference	

[a] Adjusted for complex survey design

[b] "Change in prevalence" refers to the difference in the estimated prevalences from 2007 to 2014. Estimated prevalences are from logistic regression with back-transformation to the prevalence (additive) scale. A positive difference indicates increase in use over time.

[c] "Difference in change in prevalence" for men versus women, also known as an interaction contrast. A difference that is significantly different from zero indicates additive interaction, i.e., different changes in men versus women.

[d] Three-way interaction, to determine if the differences in prevalence differences for men vs. women differ significantly by income group. A significant difference indicates that the relationship between men and women differs by income group.

Table S4: Differential trends in prevalence of past-year marijuana use by gender, by income, NSDUH 2007-2014 (N=307,935)[a]

			Adjusted for covariates[b]		
	Household income	**Gender**	**Change in prevalence**[c] (SE), p-value	**Difference in change in prevalence men vs. women**[d] (SE), p-value	**Differences by income level**[e] (SE), p-value
Daily Marijuana Users	*$0-19,999*	*Men*	2.27% (0.41), ≤.0001	1.18% (0.44), .008	1.02% (0.56), .067
		Women	1.09% (0.23), ≤.0001	reference	
	$20,000-49,999	*Men*	1.61% (0.33), ≤.0001	0.64% (0.38), .09	0.48% (0.51), .35
		Women	0.97% (0.18), ≤.0001	reference	
	$50,000-74,999	*Men*	1.54% (0.45), .0009	0.73% (0.57), .20	0.58% (0.68), .39
		Women	0.80% (0.29), .006	reference	
	$75,000+	*Men*	0.83% (0.26), .002	0.16% (0.32), .63	reference
		Women	0.67% (0.22), .002	reference	
Non-daily Marijuana Users	*$0-19,999*	*Men*	3.86% (0.76), ≤.0001	2.51% (0.88), .005	2.08% (1.21), .086
		Women	1.35% (0.59), .024	reference	
	$20,000-49,999	*Men*	3.01% (0.57), ≤.0001	1.66% (0.73), .024	1.23% (1.13), .28
		Women	1.35% (0.41), .001	reference	
	$50,000-74,999	*Men*	1.72% (0.68), .013	-0.41% (1.00), .68	-0.84% (1.29), .52
		Women	2.13% (0.62), .0007	reference	
	$75,000+	*Men*	3.01% (0.64), ≤.0001	0.43% (0.83), .60	reference
		Women	2.58% (0.53), ≤.0001	reference	

[a] Adjusted for complex survey design

[b] Covariates include age, race/ethnicity, and marital status

[c] "Change in prevalence" refers to the difference in the estimated prevalences from 2007 to 2014. Estimated prevalences are from logistic regression with back-transformation to the prevalence (additive) scale. A positive difference indicates increase in use over time.

[d] "Difference in change in prevalence" for men versus women, also known as an interaction contrast. A difference that is significantly different from zero indicates additive interaction, i.e., different changes in men versus women.

[e] Three-way interaction, to determine if the differences in prevalence differences for men vs. women differ significantly by income group. A significant difference indicates that the relationship between men and women differs by income group.