<u>Supplementary Material</u>

<u>List of Supplementary Material for the article</u>

<u>Disclaimer</u>

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Supplementary Table 1. Weighted Estimated Demographic Breakdown of the NESARC-III Population

	% (95% CI)
Sex	
Male	48.1 (47.5, 48.7)
Female	51.9 (51.3, 52.5)
Race	
White	66.2 (64.7, 67.7)
Black/African American	11.8 (10.6, 13.2)
Hispanic	14.7 (13.5, 16.1)
Other	7.3 (6.4, 8.3)
Age	
18-29	21.7 (21.0, 22.4)
30-44	25.7 (25.1, 26.4)
45-64	35.0 (34.4, 35.7)
65+	17.6 (16.9, 18.3)
Educational Attainment	
High School or Less	34.8 (33.4, 36.2)
Some College	37.1 (36.2, 38.4)
College Degree or Higher	28.2 (26.6, 29.7)
Income	
<$20,000	22.8 (21.8, 23.8)
$20,000-$34,999	18.9 (18.2, 19.6)
$35,000-$69,999	27.2 (26.6, 27.9)
>$70,000	31.1 (29.8, 32.4)
Relationship/Marital Status	
Not Married	48.8 (47.8, 49.9)
Married	51.2 (50.2, 52.4)
Employment Status	
Working Full Time	42.4 (41.4, 43.5)
Not Working Full Time	57.6 (56.5, 58.7)
Health Insurance Status	
Has Health Insurance	81.9 (81.0, 82.7)
Does Not Have Health Insurance	21.3 (18.4, 24.5)
Urbanicity	
Urban	78.8 (75.5, 81.6)
Rural	21.3 (18.4, 24.5)
Census Region	
Northeast	18.2 (17.3, 19.3)
Midwest	21.5 (20.6, 22.4)
South	37.1 (35.3, 38.8)
West	23.2 (21.5, 25.1)

Supplementary Table 2. Weighted Regression Analysis of Scaled Total Number of Mental Health and Substance Use Disorders as a Function of ACE Totals and Sociodemographics

	Number of Mental Health and Substance Use Disorders	Number of Mental Health and Substance Use Disorders
	Coefficient (SE)	Coefficient (SE)
Number of ACEs	0.118 (0.011)***	0.118 (0.011)***
Squared Total Number of ACEs	0.015 (0.002)***	0.015 (0.002)***
Sex		
Male	REF	REF
Female	-0.047 (0.017)*	-0.047 (0.017)*
Sexual Orientation		
Gay or Lesbian	0.331 (0.072)***	-0.477 (0.122)***
Bisexual	0.807 (0.097)***	REF
Not Sure	0.774 (0.182)***	-0.033 (0.207)
Discordant Heterosexual	0.177 (0.037)***	-0.631 (0.104)***
Concordant Heterosexual	REF	-0.807 (0.097)***
Race/Ethnicity		
White	REF	REF
Black/African American	-0.297 (0.031)***	-0.297 (0.031)***
Hispanic	-0.364 (0.025)***	-0.364 (0.025)***
Other Race/Ethnicity	-0.213 (0.031)***	-0.213 (0.031)***
Age Category		
18-29	0.654 (0.027)***	0.654 (0.027)***
30-44	0.671 (0.026)***	0.671 (0.026)***
45-64	0.519 (0.023)***	0.519 (0.023)***
65+	REF	REF
Educational Attainment		
High School or Less	REF	REF
Some College	0.006 (0.018)	0.006 (0.018)
College Degree or Higher	-0.187 (0.020)***	-0.187 (0.020)***
Income Category		
19,999 or less	REF	REF
$20,000-$34,999	-0.109 (0.020)***	-0.109 (0.020)***
$35,000-$69,999	-0.207 (0.025)***	-0.207 (0.025)***
>$70,000	-0.293 (0.029)***	-0.293 (0.029)***
Employment Status		
Fully Employed	-0.187 (0.020)***	-0.187 (0.020)***
Not Fully Employed	REF	REF
Marital Status		
Not Married	REF	REF
Married	-0.292 (0.018)***	-0.292 (0.018)***

Health Insurance Status

No Health Insurance	REF	REF
Has Health Insurance	0.018 (0.024)	0.018 (0.024)

Urbanicity

Urban	REF	REF
Rural	0.028 (0.025)	0.028 (0.025)

Census Region

Northeast	REF	REF
Midwest	0.004 (0.031)	0.004 (0.031)
South	-0.004 (0.029)	-0.004 (0.029)
West	0.008 (0.028)	0.008 (0.028)
Constant / Intercept	0.522 (0.043)***	1.33 (0.110)***

Significance Values: *p<0.01, **p<0.005, ***p<0.001; REF = reference category

NOTE: Interactions between sex and the two ACE terms were tested and not found to be significant, suggesting that these estimated relationships of ACE with the outcomes hold for both males and females (statistically).

Supplementary Table 3. Weighted Regression Analysis of Scaled Total Number of Mental Health and Substance Use Disorders as a Function of ACE Totals, Sexual Orientation, the ACE Total x Sexual Orientation Interaction, and Sociodemographics

	Number of Mental Health and Substance Use Disorders	Number of Mental Health and Substance Use Disorders
	Coefficient (SE)	Coefficient (SE)
Number of ACEs	0.118 (0.011)***	0.211 (0.039)***
Squared Total Number of ACEs	0.014 (0.002)***	0.014 (0.002)***
Sexual Orientation		
Gay or Lesbian	0.324 (0.114)*	-0.198 (0.166)
Bisexual	0.522 (0.128)***	REF
Not Sure	0.235 (0.194)	-0.286 (0.222)
Discordant Heterosexual	0.085 (0.048)	-0.436 (0.139)**
Concordant Heterosexual	REF	-0.522 (0.128)***
Interaction between Sexual Orientation and ACE Total		
Gay or Lesbian	0.003 (0.032)	-0.089 (0.050)
Bisexual	0.093 (0.037)	REF
Not Sure	0.169 (0.080)	0.076 (0.087)
Discordant Heterosexual	0.038 (0.020)	-0.055 (0.042)
Concordant Heterosexual	REF	-0.093 (0.037)
Sex		
Male	REF	REF
Female	-0.047 (0.017)*	-0.047 (0.017)*
Race/Ethnicity		
White	REF	REF
Black/African American	-0.297 (0.031)***	-0.297 (0.031)***
Hispanic	-0.365 (0.025)***	-0.365 (0.025)***
Other Race/Ethnicity	-0.215 (0.031)***	-0.215 (0.031)***
Age Category		
18-29	0.652 (0.027)***	0.652 (0.027)***
30-44	0.669 (0.026)***	0.669 (0.026)***
45-64	0.517 (0.023)***	0.517 (0.023)***
65+	REF	REF
Educational Attainment		
High School or Less	REF	REF
Some College	0.006 (0.018)	0.006 (0.018)
College Degree or Higher	-0.189 (0.020)***	-0.189 (0.020)***
Income Category		
$19,999 or less	REF	REF
$20,000-$34,999	-0.109 (0.020)***	-0.109 (0.020)***
$35,000-$69,999	-0.205 (0.025)***	-0.205 (0.025)***
>$70,000	-0.292 (0.028)***	-0.292 (0.028)***
Employment Status		

Fully Employed	-0.186 (0.016)***	-0.186 (0.016)***
Not Fully Employed	REF	REF
Marital Status		
Not Married	REF	REF
Married	-0.294 (0.017)***	-0.294 (0.017)***
Health Insurance Status		
No Health Insurance	REF	REF
Has Health Insurance	0.017 (0.024)	0.017 (0.024)
Urbanicity		
Urban	REF	REF
Rural	0.028 (0.025)	0.028 (0.025)
Census Region		
Northeast	REF	REF
Midwest	0.004 (0.031)	0.004 (0.031)
South	-0.005 (0.029)	-0.005 (0.029)
West	0.008 (0.028)	0.008 (0.028)
Constant / Intercept	0.533 (0.043)***	1.054 (0.127)***

Significance Values: *p<0.01, **p<0.005, ***p<0.001; REF = reference category

Supplementary Table 4. Weighted Adjusted Odds Ratios for Having Comorbid Mental Health and Substance Use Disorders, Considering ACE Totals, the Sexual Orientation × ACE Total Interaction, and Sociodemographics as Predictors

	Comorbid Mental Health and Substance Use Disorders (Binary: Comorbid or not)	Comorbid Mental Health and Substance Use Disorders (Binary: Comorbid or not)
	AOR[†] (SE)	AOR[†] (SE)
Number of ACEs	1.565 (0.038)***	1.563 (0.079)***
Squared Total Number of ACEs	0.983 (0.003)***	0.983 (0.003)***
Sexual Orientation		
Gay or Lesbian	2.492 (0.546)***	1.186 (0.364)
Bisexual	2.102 (0.452)**	REF
Not Sure	1.538 (0.663)	0.732 (0.331)
Discordant Heterosexual	1.602 (0.211)**	0.762 (0.198)
Concordant Heterosexual	REF	0.476 (0.102)**
Interaction between Sexual Orientation and ACE Total		
Gay or Lesbian	0.896 (0.049)	0.897 (0.066)
Bisexual	0.999 (0.047)	REF
Not Sure	1.008 (0.097)	1.009 (0.103)
Discordant Heterosexual	0.956 (0.028)	0.957 (0.049)
Concordant Heterosexual	REF	1.001 (0.047)
Sex		
Male	REF	REF
Female	0.870 (0.039)**	0.870 (0.039)**
Race/Ethnicity		
White	REF	REF
Black/African American	0.568 (0.035)***	0.568 (0.035)***
Hispanic	0.508 (0.036)***	0.508 (0.036)***
Other Race/Ethnicity	0.604 (0.055)***	0.604 (0.055)***
Age Category		
18-29	5.176 (0.488)***	5.176 (0.488)***
30-44	5.623 (0.525)***	5.623 (0.525)***
45-64	4.123 (0.399)***	4.123 (0.399)***
65+	REF	REF
Educational Attainment		
High School or Less	REF	REF
Some College	0.981 (0.044)	0.981 (0.044)
College Degree or Higher	0.573 (0.039)***	0.573 (0.039)***
Income Category		
$19,999 or less	REF	REF
$20,000-$34,999	0.822 (0.044)***	0.822 (0.044)***
$35,000-$69,999	0.647 (0.039)***	0.647 (0.039)***
>$70,000	0.585 (0.049)***	0.585 (0.049)***

Employment Status		
Fully Employed	0.779 (0.033)***	0.779 (0.033)***
Not Fully Employed	REF	REF
Marital Status		
Not Married	REF	REF
Married	0.516 (0.028)***	0.516 (0.028)***
Health Insurance Status		
No Health Insurance	REF	REF
Has Health Insurance	1.024 (0.059)	1.024 (0.059)
Urbanicity		
Urban	REF	REF
Rural	1.049 (0.070)	1.049 (0.070)
Census Region		
Northeast	REF	REF
Midwest	0.978 (0.075)	0.978 (0.075)
South	1.004 (0.066)	1.004 (0.066)
West	0.961 (0.071)	0.961 (0.071)
Archer-Lemeshow GOF[†] Test [F-Value (P-Value)]	0.83 (P=0.591)	0.83 (P=0.591)

Significance Values: *p<0.01, **p<0.005, ***p<0.001; REF = reference group
NOTE: Interactions between sex and the two ACE terms were tested and not found to be significant, suggesting that these estimated relationships of ACE with the outcomes hold for both males and females (statistically).

[†]AOR=Adjusted Odds Ratio, GOF=Goodness of Fit