Published in final edited form as:

J Epidemiol Community Health. 2018 June ; 72(6): 458–464. doi:10.1136/jech-2017-210259.

Disparities in Injury Morbidity Among Young Adults in the United States: Individual and Contextual Determinants

Susanne Schmidt, PhD¹ and P. Johnelle Sparks, PhD²

¹University of Texas Health Science Center San Antonio

²University of Texas at San Antonio

Abstract

Background: Injuries have been recognized as important public health concerns, particularly among adolescents and young adults. Few studies have examined injuries using a multilevel perspective that addresses individual socioeconomic status (SES) and health behaviors and local socioeconomic conditions in early adolescence. We offer a conceptual framework incorporating these various components.

Methods: We test our conceptual framework using population-data from the National Longitudinal Study of Adolescent Health Wave 4 when respondents were young adults and linked them to contextual level data from when they were middle schoolers. We use logistic and multilevel regression models to examine self-reported injury risk in young adults by sex (n=14,356).

Results: Logistic regression models showed that males were more likely to experience serious injuries than females (OR=1.75, p<.0001), but SES and health behaviors operated differently by sex. In stratified models, males with lower education had consistently higher injury risk, while only females with some college had increased injury risk (OR=1.40, p=.0089) than college graduates. Low household income (OR=1.54, p=0.0011) and unemployment (OR=1.50, p=0.0008) increased female injury risk, but was non-significant for males. Alcohol consumption increased injury risk for both sexes, while only female smokers had elevated injury risk (OR=1.38, p=0.0154). In multilevel models, significant county level variation was only observed for females. Women living in disadvantaged neighborhoods during adolescence had increased injury risk (OR=1.001, p-value<.0001).

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Corresponding Author: Department of Epidemiology and Biostatistics, The University of Texas Health Science Centers at San Antonio, 7703 Floyd Curl Drive, Mail Code 7933, San Antonio, TX 78229-3900, Phone: (210) 567-0854, Fax: (210) 567-0905, schmidts4@uthscsa.edu.

Competing Interests: None declared.

Publisher's Disclaimer: This article has been accepted for publication in the Journal of Epidemiology and Community Health following peer review. The definitive copyedited, typeset version Schmidt S, Sparks PJ. Disparities in injury morbidity among young adults in the USA: individual and contextual determinants. *J Epidemiol Community Health*. 2018 Jun;72(6):458-464. doi: 10.1136/jech-2017-210259. Epub 2018 Feb 8. is available online at: www.jech.bmj.com.

Conclusions: These findings highlight the importance of investigating mechanisms that link early life contextual conditions to early adult SES and health behaviors and their linkage to injury risk, particularly for women.

Keywords

Injuries; SES; Health Behaviors; Adolescents; Multilevel Modelling; National Longitudinal Study of Adolescent Health

Introduction

Injuries continue to be the leading cause of death during childhood, adolescence, and young adulthood in the United States¹. The health and economic burden associated with both fatal and non-fatal injuries, particularly during prime working ages when these costs are highest²³, makes the study of injury morbidity an important public health topic. In 2013, the total estimated lifetime medical and work-loss cost associated with nonfatal unintentional injuries was approximately \$161.8 billion for ages 15–44⁴. However, little attention has been given to investigating disparities in injuries from a sociodemographic perspective, although descriptive annual injury morbidity rates have shown that differences exist by educational attainment and poverty status⁵. Few studies have explored the role of contextual characteristics in determining disparities in individual injury morbidity, although the social and physical environment of individuals contributes to inequalities in injury risk^{4–7} and health in general⁵⁸, above and beyond individual characteristics.

Most empirical research on injuries has offered little in the way of a theoretical perspective from a sociodemographic standpoint. Haddon and others noted that injuries neither occur in a social nor in a physical vacuum but instead in a complex context^{9–13}. As such, it is important to examine factors contributing to injury risk from a multilevel perspective in which individuals are placed into the context in which they live. We aim to close this gap by providing a comprehensive multilevel model that moves beyond individual sociodemographic or behavioral perspectives¹⁴ for examining injury risk by building on these theories and the work of Pudrovska and Anikputa¹⁵.

Conceptual Multilevel Framework

We propose multiple paths linking adolescent neighborhood socioeconomic status (SES) to individual adult injury risk (see Figure 1). The most proximate causes include individual level adult measures of SES and adult health behaviors. We hypothesize that both adult SES (path A) and health behaviors (path B) have a direct association with adult injury risk; further, adult SES is hypothesized to influence adult health behaviors (path C)^{14,16}. These characteristics are assumed to have associations with injury morbidity, net of the effects of demographic characteristics. An additional potential protection against injury for women might be the transition to motherhood, resulting in fewer risk taking behaviors (path D).

Our conceptual model adds to the injury literature by incorporating contextual level measures of adolescent neighborhood SES. Neighborhood SES encompasses a diverse set of opportunities for economic and social development in local neighborhoods, capturing

neighborhood environments that likely promote healthy behaviors and provide safe areas for housing, schools, and other activities; alternatively these neighborhoods could promote stress, poor health behaviors and coping mechanisms, and overall less safe environments^{17,18}. First, we propose that adolescent neighborhood SES has a direct influence on adult SES adult health behaviors (path E) and (path F). Adolescents growing up in lower SES neighborhoods are likely to have fewer opportunities to acquire higher levels of SES as an adult; alternatively, adolescents living in more affluent neighborhoods are likely to have more opportunities for obtaining higher or similar levels of SES as an adult. Exposure to different social and economic environments as an adolescent likely exposes these individuals to different types of health behaviors. Living in areas where healthy behaviors are normative will lead adults to engage in more healthy behaviors, while exposure to negative health behaviors associated with low neighborhood SES will likely lead to adults engaging in less healthy behaviors. It is less clear if adolescent neighborhood SES will have a direct association with adult injury risk, hence the dotted line depicting path G in Figure 1. We assume that neighborhood SES during adolescence will have an influence on adult injury risk, because exposure to less safe environments among low SES adolescents and potentially risky activities among high SES adolescents (such as skiing or other extreme sports)¹⁹ may have an impact on the types of activities individuals engage in as an adult. Differential exposure to harmful or health promoting environments will influence how adults engage in certain activities and seek healthcare for injuries.

Although few studies have examined the effect of contextual variables on injury risk, they all provide important evidence that injury risk is not just determined by individual characteristics alone. The complexity of the process and the potential mechanisms behind it, as pointed out by Cubbin and Smith¹³, need to be addressed in injury research. To our knowledge, the conceptual model presented here is the only research that combines both individual level socioeconomic and behavioral characteristics with contextual factors to provide a comprehensive framework of injury risk for the transition from adolescence to adulthood.

Methods

To test our framework, we used the National Longitudinal Study of Adolescent Health (Add Health) – Restricted Use Files, which has been described elsewhere²⁰. In summary, 20,745 middle-schoolers were surveyed for Wave 1 in 1995. For Wave 4, 15,701 of them were re-interviewed between 2007–2009, when respondents were between 24–32 years old²⁰. Analyses of attrition showed that females, whites, and US-born adults were more likely to respond; however attrition was deemed minimal²¹. Sample weights adjusting for attrition and complex survey design were provided²¹. Bias due to non-response was determined to be negligible²². For this analysis, we used data on individual level sociodemographic and health characteristics from Wave 4 as it is the only Add Health wave that included a general injury question. Contextual level characteristics were taken from the Wave 1 Contextual Data files. After excluding 1,345 observations due to non-positive weights or missing contextual information, the final sample size was 14,356 respondents.

Measures

Outcome: Injury Risk

In Wave 4 of the Add Health, injuries were defined as *serious* unintentional and intentional injuries, such as broken bones, lesions, and other injuries that caused activity limitations within the past 12 months. 1,856 respondents reported having had a serious injury.

Individual Level Characteristics

To account for the multidimensionality of SES, we included educational attainment, household income, current employment status, and health insurance. For risky health behavior we included smoking and alcohol consumption. For females, we included whether they had ever had a live birth. We controlled for sex, age, race/ethnicity, and self-reported health to account for differences in injury risk.

Contextual Level Characteristics

The following county-level variables from Wave 1 were included in the analysis to account for differences in living environments in adolescence. As indicators of county-level neighborhood SES, the proportion of persons whose income was below the poverty threshold, the proportion of adults 25 years of age and older without a high school diploma or equivalent, and the county unemployment rate were used. These variables refer to county-level data from the 1990 US Census, when respondents were middle-schoolers. To capture a dimension of lack of social cohesion, the total crime rate per 100,000 population in 1993 was included. To create a contextual variable index, we first created a categorical variable for each variable of interest indicating whether a respondent was in the first, second, third, or fourth quartile of the distribution of the variable. Second, these categorical variables were summed to create a variable ranging from 4 to 16. Lastly, values between 4 and 7, 8 and 12, and 13 and 16 were categorized as low (better SES profile), medium, and high (worst SES profile), respectively.

Statistical Approach

SAS was used for merging the different data files and for basic data manipulation. Using SURVEYFREQ to account for complex survey design, we present weighted row percentages to show differences in injury risk by individual level characteristics and provide p-values associated with Rao-Scott chi squared testing for independence (Table 1). Further, we present weighted column percentages for individual level characteristics by sex to show the distribution of these characteristics for males and females (Table 1). We report descriptive statistics for the contextual characteristics in Table 2. Next, we estimated individual level logistic regression models with design effects using SURVEYLOGISTIC. The entire sample was analyzed first. Then a Chow-Test-analog was calculated, based on a chi-square test statistic²³, to see if the model operated differently by sex. Next, we stratified the analysis by sex since males and females differed significantly in their injury risk (Table 3). Lastly, we fitted survey design adjusted multilevel logistic regression models for females using GLIMMIX in SAS; therefore we specified random effects in the model to account for the complex survey design of Add Health (Table 4).

Results

Descriptive Statistics

Approximately 13.4 percent of young adults reported having had a serious injury. Males (17%) were significantly more likely to report an injury than females (10%) (Table 1). Differences in injury risk were noted by race/ethnicity, education, health insurance, health behaviors, and self-rated health. For females, differences in injury were noted if she had experienced a live birth. No differences in injury risk were noted by age, household income, or employment status.

Because differences in injury risk were noted by sex, bivariate statistics were used to document differences in individual characteristics by sex. Generally, females were younger, had higher levels of education, lived in lower income households, were less likely to work for pay, more likely to have insurance, and less likely to engage in risky health behaviors than males. No differences were noted in the racial/ethnic composition or self-rated health by sex.

Table 2 reports means, 95% confidence intervals, minimum and maximum values for the contextual county-level variables in Wave 1. There appears to be a fair amount of variation in neighborhood education, crime rates, unemployment rates, and poverty across respondents, indicating variability in the types of neighborhoods respondents lived in during adolescence.

Logistic Regression Analysis

In Model 1 in Table 3, males (OR=1.75, $p<.0001$) had higher odds of experiencing a serious injury than females. A protective effect could be observed for non-Hispanic Blacks (OR=0.69, $p=.0001$) and Hispanics (OR=0.79, $p=.0419$) compared to non-Hispanic Whites. Education showed a clear association with injury morbidity, with individuals with lower levels of education having significantly higher odds of reporting a serious injury than adults with a Bachelor degree or higher. Further, adults with lower household income had higher odds of reporting a serious injury (OR=1.22, $p=.0135$). Daily smokers (OR=1.24, $p=0.02$) and adults who consumed at least 1–2 alcoholic drinks a week (OR=1.40, $p<.0001$) had higher odds of having an injury compared to adults that did not smoke or consume alcohol. Lastly, persons who reported to be in poor or fair health had higher odds of reporting a serious injury (OR=1.83, $p<.0001$). Neither age, current employment status, nor health insurance were significantly associated with injury morbidity.

Models 2 (females) and 3 (males) in Table 3 show the results of the stratified analysis by sex. Results from the Chow-Test-analog ($\chi^2=81,036$; $df=17$; $p<0.0001$) indicate that the covariates in these models operate differently based on sex. For females, education did not exert a significant effect on injury morbidity, except for those with some college education but no degree (OR=1.40, $p=.0089$) compared to college graduates. For males, education had a strong effect on injury risk. Males with lower levels of education had consistently higher injury odds than male college graduates. Females with lower household income had higher odds of reporting a serious injury (OR=1.54, $p=0.0011$); no association between income and injury was noted for males. Similarly, unemployment status only had a significant positive

effect for females (OR=1.50, $p=0.0008$). While smoking had no effect on males, female daily smokers had higher odds of having an injury than female non-smokers (OR=1.38, $p=0.0154$). Alcohol consumption increased the odds of an injury for both sexes. We additionally added transition to motherhood for females to the model and found that females who have ever had a live birth were less likely to report an injury (OR=0.65, $p\text{-value}=0.0007$).

Multilevel Logistic Regression

Lastly, we estimated multilevel logistic regression models with random intercepts for both males and females; however, significant county level variation was only observed for females for whom results are presented in Table 4. Women who lived in counties that were high on poor socioeconomic neighborhood conditions (i.e. counties with higher poverty, unemployment, crime, and lower education levels) during adolescence had slightly higher and significant risk of experiencing injuries (OR=1.001, $p\text{-value}<0.0001$), compared to women who lived in average socioeconomic neighborhood conditions. In other words, having lived in a county with higher unemployment, poverty, crime rates, and lower levels of education increased the odds of having an injury after controlling for individual level characteristics. Generally, the effects of the individual level characteristics were similar in magnitude and direction to the results presented in Table 3 Model 2. Additionally, some characteristics were significant in the multilevel model, including a protective effect for younger women (OR=0.87, $p\text{-value}<0.0001$) and increased injury risk at all levels of education compared to college graduates as well as daily smokers (OR=1.34, $p\text{-value}<0.0001$).

Discussion

Results presented here lend support for previous research on injury risk at the individual level by sex^{24–26}, race/ethnicity minority status^{24,26,27}, educational level²⁸, household income²⁶. However, previous findings on the income-injury association has been mixed depending on the operationalization of income and injury²⁸. Overall, we found support for the first path in our conceptual model (Path A), indicating that SES has a direct association with injury morbidity among young adults.

Injury risk was also associated with smoking and alcohol consumption in our analysis. Alcohol consumption is a factor known to contribute to increased injury risk both in adults^{27,29} and adolescents^{30,31}. It has been noted that risky drinking behavior is more likely to result in other risky behavior, such as drunk driving²⁹. For smoking, we found that smokers were more likely to experience an injury than non-smokers. Smoking can increase injury risk by making body tissue more susceptible to injuries as it restricts processes needed for healing³² in addition to reducing bone strength³³; being “a gateway for illicit drug use” particularly among adolescents³⁴, leading to other risk behaviors; and increasing injuries through exposure to residential fires and burns caused by cigarettes³⁵. Studies focusing on adolescents have highlighted the association between smoking and increased injury risk controlling for individual characteristics and other risk behaviors^{30,31}. These other risky behaviors may serve as one mechanism by which smoking leads to injury risk. We found support for Path B in our model based on the results linking health behaviors to injury risk.

Previous research has shown that males are more likely to experience injuries than females^{24–26}. We stratified our analysis by sex since it is not clear how SES or health behaviors may influence injury risk differently by sex, as few studies have examined this relationship¹³. While a strong association was noted between educational level and injury risk for males, this pattern was not observed for females. Further, at the individual level, low income and currently being unemployed were significant predictors of injury risk for females but not males. Without stratifying the analysis by sex, the SES-injury association may be misspecified. Likewise, health behaviors operated differently by sex. Smoking and alcohol consumption increased injury risk for women, but only alcohol consumption was associated with increased injuries among men. More work is needed to understand why SES and health behaviors work differently to influence injury risk by sex during young adulthood. Work by Rogers et al.³⁶ focusing on mortality differences by sex and SES may elucidate on this as they note that differences in behaviors by sex among younger adults likely determines sex differences in mortality. Further, higher levels of SES provide a barrier against potentially harmful conditions by providing access to healthcare and insurance, social support, and better housing in safer neighborhoods. In turn, these conditions allow for more social interaction and integration that provide social networks that may buffer women from mortality risks differently than men among younger ages due to differences in behaviors. Elo³⁷ highlights the importance of early local environments and SES conditions on later adult health outcomes. This work supports our model that early life SES may work both directly and indirectly through adult SES and health behaviors to influence health outcomes. Yet Elo's review does not provide the mechanisms linking early SES conditions to later health outcomes. Our conceptual model and empirical results may offer insights into the relationships between individual and contextual SES, sex, and injury morbidity.

Our results from the contextual level models show that injury risks did not differ across counties for males. This indicates that the potential path from adolescent neighborhood SES to adult injury risk does not hold for males given our data (Path G). In our model, injury morbidity risks for males are more likely influenced by individual SES and health behaviors. For females, variation in injury risks was noted across neighborhoods. The odds ratio in the multilevel model indicates that young women had slightly, but significantly increased injury risk if they lived in more disadvantaged neighborhoods during adolescence after including current SES and health behaviors. Since we are unable to model injury risk by injury type, it is difficult to ascertain how the environmental conditions during adolescence influence social factors that may lead to specific injuries types³⁸. More research is needed to test the link proposed in our conceptual model that links early life socioeconomic conditions to adult SES and individual behaviors that influence injury morbidity.

Conclusions

Our analysis provides insights into who is at greater risk of experiencing injuries and offered a conceptual framework for studying injury risk from a multilevel, population perspective. Education is an additional driving force through which injuries and other health outcomes can potentially be prevented.

At the contextual level, our analysis provides evidence that contextual factors, measured as socioeconomic disadvantage, influence individual level injury risk, net individual socioeconomic and behavioral characteristics, for young women. Our conceptual model is a starting point to investigate the role of neighborhoods in determining injury. Understanding the underlying mechanisms of injuries can help identify groups of the population that are at higher risk of experiencing injuries, making it possible to specifically target these subgroups in injury prevention efforts in local communities and reduce costs associated with preventable injuries.

Funding Acknowledgement

Susanne Schmidt is supported by the National Center for Advancing Translational Sciences, National Institutes of Health, through Grant KL2 TR001118. The content of this project is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.

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Thumbnail Sketch:**What is already known on this subject?**

- Injuries are a leading cause of morbidity, disability, and mortality in young adults in the US, creating a great economic burden among this population.
- Disparities exist in injury morbidity and mortality by socioeconomic status, but little is known about how contextual factors contribute to these disparities.
- To date, no study has presented a comprehensive, multilevel framework combining individual level socioeconomic and behavioral characteristics with contextual factors for studying injury risk at the transition from adolescence to young adulthood.

What this study adds?

- In our analysis, the individual level determinants of injury risk differed by sex, as poverty and unemployment negatively impacted women's but not men's injury risk.
- Further, women were more vulnerable to injury risk if they lived in disadvantaged communities during adolescence, while men's young adult injury risk was not significantly influenced by their living circumstances earlier in life.
- Our framework is a starting point to better understand the underlying mechanisms of injury risk and how it pertains to young adults, allowing researchers and policy makers to identify and target at risk populations.

Figure 1:
Hypothesized mechanisms linking adolescent neighborhood SES and injury risk

Table 1:

Survey Design Adjusted Bivariate Statistics for Demographic, Socioeconomic, Behavioral, and Health Characteristics by Injury Status and Sex, Add Health Wave 4 – Restricted Use (N=14,356)

	Injury Status ¹			Sex ²		
	Injury	No Injury	p-value	Females	Males	p-value
<i>n</i>	1,856	12,500		7,633	6,723	
<i>Injury</i>						
Yes	---	---	---	9.94	16.71	<.0001
No	---	---		90.06	83.29	
<i>Demographic Characteristics</i>						
Sex						
Female	9.94	90.06	<.0001	---	---	---
Male	16.71	83.29		---	---	
Age						
24–27	13.16	86.84	.6274	36.76	33.92	.0001
28–30	13.75	86.25		50.12	49.80	
30–34	12.58	87.42		13.12	16.28	
Race/Ethnicity						
Non-Hispanic White	14.27	85.73	.0024	66.96	67.61	.5287
Non-Hispanic Black	10.71	89.29		17.10	16.05	
Hispanic	11.81	88.19		12.53	12.47	
Non-Hispanic Other	14.24	85.76		3.40	3.87	
<i>Socioeconomic Status</i>						
Educational Attainment						
Less than High School	16.49	83.51	<.0001	7.78	10.70	<.0001
High School Graduate	13.54	86.46		14.42	21.26	
At least some Vocational Training	13.25	86.75		9.44	9.62	
Some College, no degree	15.13	84.87		34.99	31.68	
Bachelor Degree or more	10.38	89.62		33.36	26.75	
Household Income						
Less than 1 st Quartile (<\$28,951)	15.17	84.83	.1189	22.91	19.45	.0148
More than 1 st Quartile	12.87	87.13		69.64	72.87	
Missing Income Information	13.06	86.94		7.45	7.69	
Current Employment Status						
Worked for Pay	13.14	86.87	.2801	75.73	86.55	<.0001
Did not work for pay	14.38	85.62		24.27	13.45	
Health Insurance Status						
Uninsured for last 12 months	14.88	85.12	.0329	12.01	20.81	<.0001
Uninsured for at least 1 month	14.66	85.34		15.88	15.40	

	Injury Status ¹			Sex ²		
	Injury	No Injury	p-value	Females	Males	p-value
Insured for all 12 months	12.70	87.30		72.11	63.79	
Health Behavior						
Daily Smoker						
Yes	17.37	82.63	<.0001	21.26	26.06	<.0001
No	12.13	87.87		78.74	73.94	
Alcohol Consumption in last 12 m						
At least 1 or 2 drinks a week	16.68	83.32	<.0001	21.98	40.21	<.0001
Less than once a week	11.87	88.13		78.02	59.79	
Ever had live birth (women only)						
Yes	8.80	91.20	.0152	56.25	---	---
No	11.41	88.59		43.75	---	
Self-Rated Health						
Fair/Poor/Very Poor Health	21.20	78.80	<.0001	9.74	9.03	0.2910
Excellent, Good	12.56	87.44		90.26	90.97	

¹For injuries, we present survey design adjusted row percentages to show differences in injury risk by individual level characteristics.

²Survey design adjusted column percentages are presented for individual characteristics by sex to show the distribution of these characteristics for males and females.

p-values presented in the table are associated with Rao-Scott Chi squared testing for independence of row and column variables.

Table 2:

Survey Design Adjusted Descriptive Statistics for the County-Level Variables from Wave 1, Add Health – Restricted Use

	Mean	95 % CI	Min	Max
Proportion in Poverty, 1990	0.14	0.13–0.15	0.03	0.40
Unemployment Rate, 1990	0.07	0.06–0.07	0.03	0.14
Proportion aged 25 w/o High School Diploma, 1990	0.25	0.23–0.26	0.05	0.61
Total Serious Crimes per 100,000, 1993	5668.23	5169.52–6166.93	0	16855.30

CI: Confidence Interval

Table 3:

Survey Design Adjusted Odds Ratios (OR) for Logistic Regression for all Adults and Stratified by Sex, Add Health – Restricted Use (N=14,356)

	Model 1: Complete Sample OR (p-value)	Model 2: Females (N=7,633) OR (p-value)	Model 3: Males (N=6,723) OR (p-value)
<i>Demographic Characteristics</i>			
Sex (Females= Ref)			
Male	1.75 (<.0001)	---	---
Age (28–30= Ref)			
24–27	0.93 (.3805)	0.85 (.1658)	0.95 (.6737)
30–34	0.89 (.2315)	1.09 (.6092)	0.80 (.0758)
Race/Ethnicity (Non-Hisp. White= Ref)			
Non-Hispanic Black	0.69 (.0001)	0.73 (.0217)	0.69 (.0021)
Hispanic	0.79 (.0419)	0.79 (.1434)	0.78 (.1063)
Non-Hispanic Other	1.07 (.6505)	1.14 (.5983)	1.09 (.7029)
<i>Socioeconomic Status</i>			
Educational Attainment (Bachelor Degree or more= Ref)			
Less than High School	1.47 (.0042)	0.88 (.6194)	2.04 (<.0001)
High School Graduate	1.19 (.1979)	1.13 (.6026)	1.32 (.0622)
At least some Vocational Training	1.25 (.0495)	0.87 (.5267)	1.64 (.0011)
Some College, no degree	1.49 (<.0001)	1.40 (.0089)	1.67 (<.0001)
Household Income (More than 1 st Quartile = Ref)			
Less than 1 st Quartile (<\$28,951)	1.22 (.0135)	1.54 (.0011)	1.09 (.4051)
Missing Income Information	0.99 (.9394)	1.33 (.2561)	0.77 (.1633)
Currently Employed (Yes= Ref)			
Did not work for pay	1.14 (.2039)	1.50 (.0008)	0.96 (.7317)
Health Insurance Status (Insured= Ref)			
Uninsured for last 12 months	0.91 (.3043)	0.74 (.0749)	0.97 (.8232)
Uninsured for at least 1 month	1.05 (.5830)	1.11 (.4425)	1.04 (.7486)
<i>Health Behavior</i>			
Daily Smoker (No = Ref)			
Yes	1.24 (.0200)	1.38 (.0154)	1.18 (.1429)
Alcohol Consumption in last 12 months (Less than once a wee = Ref)			
At least 1 or 2 drinks a week	1.40 (<.0001)	1.36 (.0231)	1.35 (.0003)
<i>Ever had live birth (No=Ref)</i>			
Yes	---	0.65 (.0007)	---
<i>Poor Self-Rated Health (No= Ref)</i>			
Yes	1.83 (<.0001)	1.78 (.0020)	1.84 (<.0001)

Table 4:

Survey Design Adjust Odds Ratios (OR) for Multilevel Logistic Regression Model for Females, Add Health – Restricted Use (N=7,633)

	OR	p-value
Contextual Variable Index (Medium = Ref)		
Low (better SES profile)	1.12	.9235
High (worst SES profile)	1.001	<.0001
Demographic Characteristics		
Age (28–30 = Ref)		
24–27	0.87	<.0001
30–34	1.10	.6959
Race/Ethnicity (Non-Hisp. White = Ref)		
Non-Hispanic Black	0.71	<.0001
Hispanic	0.71	.4669
Non-Hispanic Other	0.68	<.0001
Socioeconomic Status		
Educational Attainment (Bachelor Degree or more = Ref)		
Less than High School	1.07	<.0001
High School Graduate	1.10	<.0001
At least some Vocational Training	1.08	<.0001
Some College, no degree	1.42	<.0001
Household Income (More than 1 st Quartile = Ref)		
Less than 1 st Quartile (<\$28,951)	1.41	<.0001
Missing Income Information	0.94	<.0001
Currently Employed (Yes = Ref)		
Did not work for pay	1.20	<.0001
Health Insurance Status (Insured = Ref)		
Uninsured for last 12 months	0.68	<.0001
Uninsured for at least 1 month	0.99	<.0001
Health Behavior		
Daily Smoker (No = Ref)		
Yes	1.34	.1533
Alcohol Consumption in last 12 months (Less than once a week = Ref)		
At least 1 or 2 drinks a week	1.39	<.0001
Ever had live birth (No = Ref)		
Yes	0.74	.0281
Poor Self-Rated Health (No = Ref)		
Yes	1.90	<.0001