



# Young adult cancer survivors and substance abuse: Results from the U.S. National Health Interview Survey, 1997-2010

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## BACKGROUND

Young people (18–25yrs) with risky behaviors such as alcohol and cigarette use are at a greater risk of associated morbidity and mortality. Young adults who suffer from chronic health conditions such as cancer are expected to refrain from such behavior.

Employment and financial independence are some of the major supporting factors of these undesirable habits; therefore, it is expected that unemployed young adults are less likely to engage in such risky behaviors.

We examined the self-reported use of cigarettes and risky alcohol consumption among U.S. young adult cancer survivors and made comparisons to their peers who had never had a cancer diagnosis.

## METHODS

We analyzed pooled data from the 1997 to 2010 U.S. National Health Interview Survey (NHIS). Study sample included all persons 18 to 25 years (n=44,303).

Participants who responded yes to “Have you ever been told by a doctor or other health professional that you had...Cancer or a malignancy of any kind?” were categorized as persons with a cancer diagnosis.

Variables of interest were current alcohol consumption and cigarette use.

Predictor variables were cancer diagnosis, employment and occupation.

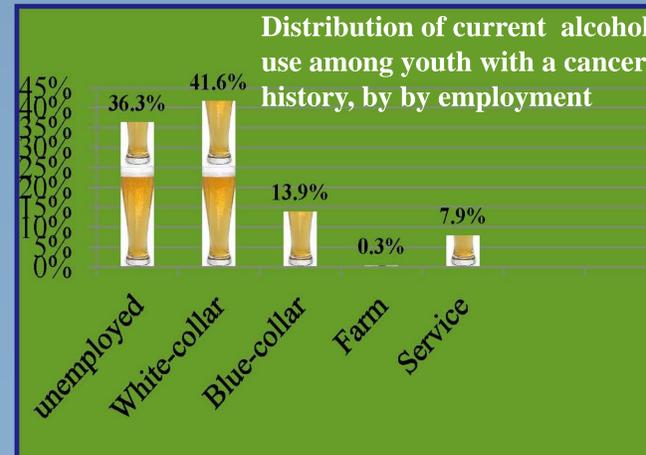
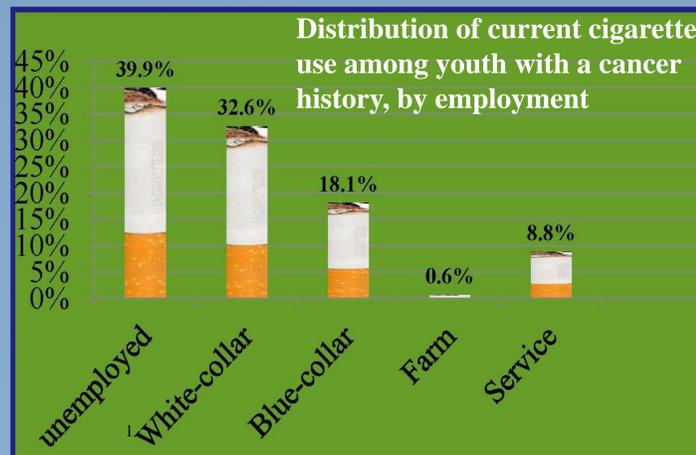
Data management and analyses were conducted using SAS statistical software package version 9.2 which allows for analysis of weighted, complex survey data.

## RESULTS

Demographic distribution of youth with cancer compared to all youth. National Health Interview Survey 1997-2010. (n=44,303)

Socio-demographics	Youth without Cancer(n=43,408)		Youth with Cancer (n=895)	
	Employed	Unemployed	Employed	Unemployed
<b>Age</b>				
18-20 years old	10,884 (38.2%)	4,217 (43.1%)	248 (44.1%)	143 (60.3%)
21-25 years old	17,634 (62.8%)	5,556 (56.9%)	314 (55.9%)	94 (39.7%)
<b>Race/Ethnicity</b>				
White non-Hispanic	20,460 (62.3%)	5,525 (52.7%)	473 (73.5%)	156 (62.2%)
Black non-Hispanic	3,998 (12.2%)	1,964 (18.7%)	61 (9.5%)	43 (17.1%)
Hispanic	6,685 (20.3%)	2,107 (20.1%)	89 (13.8%)	39 (15.5%)
Other	1,720 (5.2%)	896 (8.5%)	21 (3.2%)	13 (5.2%)
<b>Gender</b>				
Male	17,568 (53.5%)	5,595 (53.3%)	310 (48.1%)	134 (53.4%)
Female	15,295 (46.5%)	4,897 (46.7%)	334 (51.9%)	117 (46.6%)
<b>Education</b>				
<13 grade	4,478 (13.8%)	2,216 (21.4%)	96 (15.0%)	68 (27.3%)
High Sch grad/GED	8,658 (26.7%)	2,630 (25.3%)	188 (29.3%)	70 (28.1%)
Some Coll. or higher	19,348 (59.6%)	5,532 (53.3%)	357 (55.7%)	111 (44.6%)
<b>Substance Use</b>				
Current smoker	8,052 (24.7%)	2,305 (22.1%)	162 (25.2%)	62 (24.8%)
Former smoker	3,888 (11.9%)	1,100 (10.6%)	163 (25.4%)	64 (25.6%)
Never smoker	20,642 (63.4%)	7,007 (67.3%)	318 (49.5%)	124 (49.6%)
Current drinker	22,816 (70.8%)	6,138 (59.7%)	404 (63.0%)	124 (50.4%)
Former drinker	2,185 (6.8%)	814 (42.8%)	113 (17.6%)	61 (24.8%)
Never drinker	7,215 (22.4%)	3,328 (32.4%)	124 (19.3%)	61 (24.8%)

- Reports of cigarette use was highest among unemployed young adults with a cancer history.
- Alcohol and cigarette use was high among white collar working young adults



Multivariable logistic regression models of Alcohol and cigarette use by cancer status among young adults in the United States. National Health Interview Survey 1997-2010 (n=44,303)

Predictors	Alcohol Use	Tobacco Use
<b>Race-ethnicity among all youth (ref= White, non-Hispanic)</b>		
Black, non-Hispanic	0.39 [0.20-0.75]	0.34 [0.24-0.48]
Hispanic	0.69 [0.36-1.33]	0.35 [0.16-0.77]
Other	1.11 [0.11-11.42]	1.24 [0.59-2.62]
<b>Education among all youth (ref= &lt;high school/&lt;13th grade ) -</b>		
High school grad/ GED	0.85 [0.48-1.52]	0.56 [0.39-0.81]
Some Coll/Coll degree	1.75 [0.90-3.40]	0.38 [0.24-0.62]
<b>Employment status among youth with cancer (ref= unemployed youth)</b>		
Employed	2.08 [1.17-3.71]	0.64 [0.39-1.04]
<b>Occupation among youth with cancer (ref= white-collar worker)</b>		
Blue-collar	0.55 [0.35-0.85]	1.87 [0.96-3.61]
Farm	--	--
Service	0.51 [0.26-1.00]	1.66 [1.15-2.39]

- Among all youth, non-Hispanic Blacks are less likely to use alcohol and both Blacks and Hispanics are less likely to smoke cigarettes compared to White, non-Hispanic young adults.
- Among young adults with a cancer diagnosis, employed young adults are significantly more likely to use alcohol as compared to their unemployed counterparts.
- When compared to young cancer workers in white-collar occupations, blue-collar workers are less likely to use alcohol and workers in service occupations are significantly more likely to smoke cigarettes.

## CONCLUSION

- Though a high percent of young adults reported alcohol use, differences by cancer history is small. There is a large disparity in cigarette smoking between young adults with and those without a cancer history.
- Alcohol and cigarette use among young adults with cancer is on par with their peers who had never had a cancer diagnosis.
- Employment may act as a social and financial enabler for alcohol and cigarette use among this population.
- Findings suggest the need for investigation into coping and lifestyle behaviors among young adults with a cancer history.

