

Appendix
Softening Among U.S. Smokers With Psychological Distress: More Quit Attempts
and Lower Consumption as Smoking Drops
Kulik and Glantz

Appendix Table 1. Data Characteristics: NHIS 1997–2015

Year	Adult sample, n	Total sample (574,690)			Current smokers (118,604)		
		No psychological distress	Moderate distress	Serious distress	No psychological distress	Moderate distress	Serious distress
1997	36,116	28,054	6,159	1,409	6,267	1,948	591
1998	32,440	25,552	5,229	1,130	5,466	1,700	463
1999	30,801	25,193	4,244	867	5,399	1,334	367
2000	32,374	26,141	4,666	991	5,407	1,519	395
2001	33,326	25,357	5,861	1,179	5,174	1,847	467
2002	31,044	24,980	4,357	1,024	4,995	1,360	460
2003	30,852	24,350	4,703	1,101	4,630	1,433	465
2004	31,326	24,744	4,842	1,112	4,566	1,396	469
2005	31,428	24,943	4,852	1,084	4,608	1,372	451
2006	24,275	19,426	3,572	781	3,426	1,045	324
2007	23,393	19,101	3,205	671	3,129	936	258
2008	21,781	17,214	3,528	752	2,962	1,058	320
2009	27,731	21,932	4,554	956	3,747	1,357	423
2010	27,157	21,274	4,610	1,023	3,463	1,259	394
2011	33,014	26,183	5,300	1,252	4,168	1,510	519
2012	34,525	28,101	5,024	1,181	4,479	1,450	475
2013	34,557	25,947	5,927	1,406	3,965	1,470	552
2014	36,697	28,275	5,866	1,249	4,243	1,480	464
2015	33,672	25,266	5,772	1,218	3,360	1,334	485
Total	586,509	462,033	92,271	20,386	83,454	26,808	8,342

NHIS, National Health Interview Survey

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Appendix Table 2. Smoking Prevalence/Current Smoker (OR and 95% CIs From Logistic Regression)

Covariates and model fit	No psychological distress		Moderate psychological distress		Serious psychological distress	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
Time (per 10 years) ^a	0.72 (0.71, 0.74)**	0.80 (0.78, 0.82)**	0.81 (0.78, 0.84)**	0.90 (0.87, 0.94)**	0.92 (0.86, 0.98)**	0.97 (0.90, 1.04)
Gender						
Male		1		1		1
Female		0.77 (0.75, 0.79)**		0.85 (0.81, 0.88)**		0.82 (0.75, 0.89)**
Age		0.98 (0.98, 0.99)**		0.98 (0.97, 0.98)**		0.97 (0.97, 0.97)**
Marital status						
Married/Living with partner		1		1		1
Never married		0.96 (0.93, 0.99)**		0.92 (0.87, 0.97)**		0.86 (0.76, 0.96)**
Widowed/Divorced/Separated		1.72 (1.68, 1.76)**		1.57 (1.50, 1.65)**		1.55 (1.41, 1.70)**
Alcohol use						
Current drinker		1		1		1
Former drinker		0.76 (0.74, 0.79)**		0.79 (0.74, 0.83)**		0.78 (0.71, 0.86)**
Lifetime abstainer		0.25 (0.24, 0.26)**		0.24 (0.23, 0.26)**		0.29 (0.26, 0.33)**
Educational level						
0–11 years/12 years without diploma		1		1		1
HS diploma/GED or equivalent		0.74 (0.72, 0.76)**		0.75 (0.71, 0.80)**		0.82 (0.74, 0.91)**
Some college/AA degree		0.45 (0.44, 0.47)**		0.49 (0.46, 0.52)**		0.52 (0.47, 0.58)**
BA degree and higher		0.17 (0.17, 0.18)**		0.20 (0.19, 0.22)**		0.26 (0.22, 0.30)**
Race/Ethnicity						
Non-Hispanic white		1		1		1
Non-Hispanic black		0.86 (0.83, 0.89)**		0.77 (0.73, 0.82)**		0.77 (0.69, 0.86)**
Hispanic		0.43 (0.42, 0.45)**		0.38 (0.35, 0.40)**		0.37 (0.33, 0.42)**
Non-Hispanic all other race groups		0.86 (0.81, 0.91)**		0.76 (0.68, 0.86)**		0.63 (0.49, 0.79)**
Constant	0.22 (0.22, 0.22)	1.96 (1.87, 2.06)**	0.42 (0.41, 0.43)	3.32 (3.03, 3.64)**	0.73 (0.70, 0.76)	7.24 (6.01, 8.72)**
Model fit <i>p</i> -value	<i>p</i> <0.01	<i>p</i> <0.01	<i>p</i> <0.01	<i>p</i> <0.01	<i>p</i> <0.01	<i>p</i> <0.01

Notes: Boldface indicates statistical significance (**p*<0.05; ***p*<0.01).

^a Year centered on 2006 (−9 to 9), and divided by 10.

HS, High School; GED, General Educational Development (High School Equivalency); AA, Associate; BA, Bachelor

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Appendix Table 3. Quit Attempts, Consumption, and Smoking Prevalence (Coefficients and 95% CIs)

Covariates and model fit	Smoking prevalence/Current smoker (Logistic regression)	Proportion with at least one quit attempt in past 12 months (Logistic regression)	Consumption cigarettes/day (Linear regression)
Time (per 10 years) ^a	0.80 (0.78, 0.82)**	1.13 (1.09, 1.17)**	-2.78 (-2.93, -2.63)**
Psychological distress status: Kessler 6 scale			
No distress (0–4 points)	1	1	1
Moderate psychological distress (5–12 points)	1.65 (1.61, 1.69)**	1.39 (1.34, 1.44)**	1.36 (1.19, 1.54)**
Serious psychological distress (13–24 points)	2.78 (2.67, 2.90)**	1.44 (1.35, 1.53)**	3.71 (3.38, 4.04)**
Interaction of K-6 level and time			
No distress * time	1	1	1
Moderate psychological distress * time	1.12 (1.08, 1.17)**	1.01 (0.95, 1.08)	-0.37 (-0.67, -0.07)*
Serious psychological distress * time	1.20 (1.12, 1.28)**	0.99 (0.90, 1.10)	-0.54 (-1.14, 0.06)
Gender			
Male	1	1	1
Female	0.78 (0.77, 0.80)**	1.08 (1.05, 1.12)**	-2.96 (-3.10, -2.82)**
Age	0.98 (0.98, 0.98)**	0.99 (0.99, 0.99)**	0.09 (0.08, 0.10)**
Marital status			
Married/Living with partner	1	1	1
Never married	0.94 (0.92, 0.97)**	0.93 (0.89, 0.97)**	-1.34 (-1.50, -1.17)**
Widowed/Divorced/Separated	1.68 (1.64, 1.71)**	1.01 (0.97, 1.05)	0.16 (-0.01, 0.34)
Alcohol use			
Current drinker	1	1	1
Former drinker	0.77 (0.75, 0.79)**	1.00 (0.96, 1.04)	1.10 (0.89, 1.31)**
Lifetime abstainer	0.25 (0.24, 0.26)**	0.86 (0.81, 0.91)**	-0.13 (-0.38, 0.12)
Educational level			
0–11 years/12 years without diploma	1	1	1
HS diploma/GED or equivalent	0.75 (0.73, -0.77)**	1.05 (1.01, 1.10)*	-0.87 (-1.07, -0.67)**
Some college/AA degree	0.46 (0.45, 0.48)**	1.30 (1.24, 1.36)**	-2.11 (-2.32, -1.91)**
BA degree and higher	0.18 (0.18, 0.19)**	1.29 (1.22, 1.36)**	-4.86 (-5.11, -4.62)**
Race/Ethnicity			
Non-Hispanic white	1	1	1
Non-Hispanic black	0.84 (0.81, 0.86)**	1.33 (1.27, 1.40)**	-5.36 (-5.54, -5.11)**
Hispanic	0.42 (0.41, 0.43)**	1.16 (1.10, 1.22)**	-7.82 (-8.03, -7.61)**
Non-Hispanic all other race groups	0.83 (0.79, 0.87)**	1.16 (1.06, 1.26)**	-4.39 (-4.74, -4.03)**
Constant	1.99 (1.91, 2.07)**	1.09 (1.02, 1.17)*	14.36 (14.04, 14.68)**
Model fit R ²			0.17
Model fit <i>p</i> -value	<i>p</i> <0.01	<i>p</i> <0.01	<i>p</i> <0.01

Notes: Boldface indicates statistical significance (**p*<0.05; ***p*<0.01).

^a Year centered on 2006 (–9 to 9), and divided by 10.

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