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Crushing hope: Short term responses to tragedy vary by hopefulness

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Abstract

This paper explores the consequences of hopefulness when the environment changes. Much literature has documented the importance of a positive outlook in pursuing investments in health and education that pay off in the future. A question that has received less attention is whether a positive outlook creates resilience in the face of setbacks or whether a positive outlook may be a disadvantage in extreme circumstances, especially when there is a large mismatch between expectations and reality. This paper uses the coincidental interview schedule of the Add Health data ($N = 15,024$) around the terrorist attack of September 11, 2001 to examine interactions with this environmental shock and previously elicited measures of hopefulness. The results suggest that increases in depressive symptoms following the attack are concentrated among those young adults who initially expressed the most hopefulness in the future as teenagers.

Keywords

Evolutionary psychology; Hopefulness; Mismatch; Depressive symptoms; Trauma

1. Introduction

Large literature across the psychological and social sciences have focused on understanding social and psychological processes underlying resilience to stressful and traumatic events, where resiliency is conceptualized in the literature as “the human capacity to face, overcome, and even be strengthened by the adversities of life” (Grotberg, 1995). A key hypothesized determinant of resilience is expectations about the future. In particular, people who are measured to have high dispositional optimism, typically report lower distress after encountering a broad range of stressful situations (Andersson, 1996; see Nes and Segerstrom 2006 for review and meta analyses). A primary hypothesized mechanism is the set of coping strategies employed by individuals with higher dispositional optimism, where approach coping strategies that aim to eliminate and manage stressors are used rather than avoidance coping strategies that ignore, avoid, or withdraw from stressors.

Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.socscimed.2018.01.039>.

An alternative set of findings have suggested that traits like dispositional optimism and their associated coping strategies are not good or bad predictors of resilience, per se, but rather the key determinant of resilience is whether individuals and their experiences and traits are matched or mismatched with the environmental stressors that they face (Nederhof et al., 2014). This latter theory, and associated evidence, builds off theories in evolutionary and developmental psychology suggesting that individuals' early environments "program" them in ways that will be beneficial in their expected environments as adults (Boyce and Ellis, 2005; Frankenhuis and Del Giudice 2012; Brody et al., 2013). In cases where the child and adult environments differ, adults can become mismatched with their environments. In particular, adults who develop dispositional optimism as children and adolescents due to living in a safe and secure early environment may be less able to cope with adult trauma than adults who developed lower levels of optimism.

In the present study, I tested the hypothesis that a measure of self-reported hopefulness in contexts of trauma lead to higher resilience to the formation of depressive symptoms. The alternative hypothesis is that individuals with high hopefulness will be less likely to cope with trauma due to a mismatch between their coping strategy and the level of stress in the environment and will therefore experience higher levels of depressive symptoms following a traumatic event. I test this hypothesis using a prospective, nationally representative sample using a "natural experiment" framework to support causal inference.

2. Method

2.1. Sample

Data came from the first and third waves of the National Longitudinal Study of Adolescent to Adult Health (Add Health) (Harris et al., 2009). Add Health is a prospective nationally representative sample of US students in grades 7–12 in 1994/5 who have been followed through 2008/9 in four waves of surveys to understand life course processes of health and socioeconomic attainment. Of the 20,745 respondents in Wave 1, 20,662 have a non-missing report for hopefulness, 15,123 were followed in the Wave 3 data collection, and 15,024 of those followed have outcome information available, which is the analysis sample.

2.2. Measures

2.2.1. Baseline emotions style—The first wave of the survey collected rich sociodemographic, health, and schooling information including a Center for Epidemiology Studies Depression (CES-D) screener (Garrison et al., 1991) that contained the question of whether the respondent "felt hopeful about the future" during the past week. Answer options include (never/rarely, sometimes, a lot of the time, and most/all of the time). This question is used to assign "hopefulness" at baseline. Other researchers have used Add Health data and questions about early mortality expectations as a measure of hope and found associations with financial and social capital (Bennett et al., 2014).

2.2.2. Exposure to a traumatic event—The Wave 3 data collection occurred over 2001–2002 and coincidentally overlapped with the terrorist attacks on the United States on September 11, 2001. We use the date of the Wave 3 interview as our indicator of exposure to

a traumatic event. Ford et al. (2003) and Fletcher (2014) used these data to show that being interviewed following the attacks resulted in elevated depressive symptoms compared to those interviewed prior to the attacks (see also Metcalfe et al., 2011 for evidence from the UK).

2.2.3. Depressive symptoms—A shortened, 9-item, CES-D screener was used at Wave 3. Each item was based on a question of “How often was each of the following things true during the past seven days?” and had available responses of: never/rarely, sometimes, a lot of the time, and most/all the time. The items included: you were bothered by things that usually don’t bother you; you could not shake off the blues, even with help from your family and friends; you felt that you were just as good as other people (reverse coded); you had trouble keeping your mind on what you were doing; you were depressed; you were too tired to do things; you enjoyed life (reverse coded); you were sad; you felt that people disliked you. These items are summed to create a depression scale (0 points for never up to 3 points for most/all the time).

2.3. Statistical analysis

To examine whether individuals’ elevated depressive symptoms following the terrorist attack on September 11, 2001 was conditional on baseline hopefulness, I compared the depressive symptoms of individuals who were interviewed before vs. after the attack and estimated differences in elevated symptoms conditional on Wave 1 hopefulness. I performed linear regression analysis with controls for sociodemographic characteristics and day of the interview to adjust for seasonal differences in depressive symptoms (Tefft, 2012). The key coefficient of interest was the interaction between baseline hopefulness and an indicator for being interviewed after 9/11. Additional analyses examine this interaction for each of the 9 items of the depression index separately. An important assumption of this analysis is that the “exposure” of being interviewed before vs. after 9/11 is uncorrelated with baseline hopefulness, which I test in supplemental tables (Table 5A).

Additional supplemental files show that attrition at Wave 3 is not statistically related to hopefulness at baseline (Table 4A).

3. Results

Descriptive statistics of all variables used in the analysis are shown in Table 1. The average depression scale score at Wave 3 follow up is 4.64 (4.09 SD) in the sample. At baseline, 11% of the sample reported never/rarely feeling hopeful, 26% report sometimes, 34% report a lot, and 29% report most/always feeling hopeful. 78% of the sample were interviewed following the terrorist attack and are therefore the “treated” group. Sociodemographic and educational control variables include race/ethnicity, age, sex, family income during high school, maternal education level, the Peabody Picture Vocabulary Test (PVT), and indicator variables for missingness of these control variables. Appendix Table 1A stratifies the descriptive statistics based on Wave 1 hopefulness. Appendix Table 2A presents statistical associations between the sociodemographic controls and Wave 1 hopefulness using OLS regression analysis. Individuals with higher PVT scores and from more highly educated families have higher hopefulness. Black respondents (conditional on socioeconomic status)

report higher hopefulness than whites; Hispanic and “other” race/ethnic groups report lower hopefulness than whites.

Table 2 presents the main results predicting depression symptoms at Wave 3. The post 9/11 indicator coefficient suggests that individuals interviewed following the terrorist attacks of 9/11 had depressive symptoms that were 0.436 points higher (approximately 0.1 standard deviations) than those interviewed before the attacks. Baseline hopefulness also predicts depressive symptoms; those who reported being hopeful “most/all” the time have a 1 point lower depressive symptom score than those who reported “never/rarely” being hopeful at baseline (which is approximately six years prior to the depressive reports). The results also reproduce results from the literature, that racial/ethnic minorities report higher depressive symptoms, as do female respondents.

Column 2 of Table 2 focuses attention on the key coefficient of interest and shows an interaction between exposure to the traumatic experience and baseline hopefulness. Indeed, individuals with higher levels of baseline hopefulness are found to have an elevated response to the terror attacks compared to individuals with lower baseline hopefulness. Appendix Table 3A stratifies these analyses by baseline hopefulness, which further supports an elevated response to the terrorist attack for individuals with higher baseline hopefulness.

Table 3 further examines the elevated responsiveness to the terrorist attacks for individuals with higher baseline hopefulness by examining each of the 9 depressive symptoms, in separate analyses. Column 1 in Table 3 reproduces results from Table 2 for comparison. The results suggest no differences in four of the depressive symptoms, including being bothered by things, being distressed, being sad, and thinking that people dislike you. In contrast, individuals with high baseline hopefulness have elevated responses for symptoms such as feeling not as good, not enjoying life, feeling too tired, and not being able to shake off the blues.

4. Discussion

This study is among the first to show evidence of detrimental effects of mismatch between emotional style and the environmental context using a representative national sample and a severe stressor (the 9/11 terrorist attack in the US). Large literature in the psychological and social sciences have shown a wide range of life course benefits for individuals who are hopeful and optimistic about the future (Dougall et al., 2001). Indeed, hope and optimism have been claimed to “serve as a priceless asset in the face of adversity” (Bennett et al., 2014). A potential disadvantage of hopefulness may occur when the environmental context is highly stressful, which could lead to a mismatch between cognitive style and realistic outcomes. In cases of stressful or highly disadvantaged environments, individuals who are not overly hopeful may have an advantage in coping. Indeed, the evidence in this paper supports the mismatch hypothesis, that hopefulness is a valuable trait, in terms of lower depressive symptoms, when the environment is relatively stable, but that this trait may be ill adaptive in contexts of more severe trauma and uncertainty. The results conflict with some smaller studies in the literature. For example, Fredrickson et al. (2003) interviewed fewer

then fifty college studies to show that positive emotions buffer against depression following the terrorist attacks of 9/11.

This evidence is consistent with results from both studies using human and animal models (Frankenhuis and Del Giudice 2012; Schmidt, 2011). Nederhof et al. (2014) showed that adolescents who the authors label as “sustainers” in terms of their invariant attentional style across tasks performed poorly in changing environments compared with adolescents labeled as “shifTERS”, who made changes in their attentional styles across tasks. Likewise, many researchers have reported that rats who experienced elevated early life stress showed adaptations, such as lower levels of depressive-type symptoms, under stressful conditions (Champagne et al., 2008, Kiank et al., 2009).

A strength of the analysis is the ability to use a “natural experiment” approach to more clearly demonstrate causal effects. The key assumption in the research design is that the Wave 3 interview date, and therefore the timing of the exposure to the terrorist attack, is quasi-randomly assigned, which allows individuals interviewed shortly before the attack to serve as appropriate counterfactuals to those interviewed shortly after the attack. Our results are consistent with the assumption, as hopefulness and other characteristics are unrelated to the interview date. Another strength of the analysis is the use of a measure of hopefulness collected over six years prior to the exposure and outcome measurement. To the extent this trait changes during the intervening years between assessment and outcome measurement, the expectation is that this measurement error would attenuate the results toward zero. Limitations of the study include the use of a single item to measure pre-exposure hopefulness, the lack of evidence of the construct validity of the measure, and the potential that the effects of the stressor (i.e. 9/11) do not generalize to other stressors in other contexts.

The evidence of the role of stress in depression is important in part because of its potential implications for both clinical practice as well as future research. An ongoing question implied by the results is: what contexts and for what levels of stress does the mismatch hypothesis apply? A tradeoff in the level of hopefulness appears to be that individuals with high hopefulness who were interviewed prior to the 9/11 terrorist attack had substantially lower levels of depressive symptoms than those with low hopefulness. This evidence is consistent with a broader literature showing the benefits of a related construct, optimism, across many life domains Carver et al., 2010 for review. However, under circumstances of high stress, those with high hopefulness experienced more elevated negative reactions. This paper is unable to examine the dynamics of hopefulness post-trauma. Other work has suggested that the trajectories of optimism post-trauma are important predictors of resilience and also interact with other social factors, like social support availability (Dougall et al., 2001). There is also uncertainty about the ability for clinicians to shape traits related to hopefulness and optimism due to the strong genetic influence on these traits (Feder et al., 2009). Future research might direct attention to assessing under which contexts and for what outcomes the mismatch hypothesis appears to dominate and whether strategies to shape hopefulness and/or shape strategies to avoid specific environmental exposures may be more fruitful.

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Appendix Tables

Table A1

Descriptive Statistics for Add Health Analysis Sample Stratified by Wave 1 Hopefulness

Variable	Wave	Never/ Rarely	Sometimes		A Lot		Most/A ll		
		N=1694	Mean	Std. Dev	N=3859	Mean	Std. Dev	N=5081	Mean
Depression Scale	3	5.36	4.30	5.26	4.10	4.45	4.00	4.03	3.99
Bothered by things	3	0.62	0.75	0.58	0.70	0.53	0.68	0.48	0.68
Could not shake off blues	3	0.40	0.68	0.38	0.67	0.33	0.66	0.30	0.64
Felt not as good	3	0.98	1.05	0.88	0.98	0.68	0.89	0.57	0.87
Distracted	3	0.67	0.78	0.67	0.75	0.60	0.73	0.57	0.74
Depressed	3	0.40	0.69	0.40	0.68	0.33	0.65	0.30	0.62
Too Tired	3	0.68	0.74	0.70	0.74	0.63	0.73	0.59	0.72
Did not enjoy life	3	0.80	0.89	0.78	0.86	0.60	0.79	0.52	0.78
Sad	3	0.52	0.71	0.56	0.68	0.51	0.69	0.47	0.67
People dislike you	3	0.28	0.57	0.31	0.58	0.25	0.55	0.24	0.55
Depression Scale	4	3.01	2.66	2.97	2.69	2.49	2.48	2.33	2.45
Time (days)	3	225.16	76.13	224.70	75.59	224.85	75.38	223.42	75.80
Indicator for Post 9/11	3	0.79	0.41	0.77	0.42	0.78	0.41	0.78	0.42
Black	All	0.27	0.45	0.20	0.40	0.18	0.39	0.26	0.44
Hispanic	All	0.21	0.41	0.19	0.39	0.15	0.36	0.13	0.34
Other Race	All	0.08	0.28	0.09	0.29	0.09	0.28	0.07	0.25
Male	All	0.49	0.50	0.45	0.50	0.48	0.50	0.47	0.50
Age	3	21.77	1.74	22.01	1.76	22.00	1.78	21.92	1.78
Family Income	1	40.92	37.55	44.36	36.62	47.25	39.28	47.63	44.80
Maternal Education	1	12.74	2.29	12.96	2.32	13.32	2.25	13.48	2.21
PVT Score	1	94.42	14.45	98.24	14.22	102.40	13.32	102.66	13.65

Table 2A

Predictors of Wave 1 Hopefulness OLS Regression Analysis

Outcome	Hopefulness
Black	0.096 ^{***} (0.029)
Hispanic	-0.065 [*] (0.035)
Other Race	-0.076 [*] (0.043)
Male	-0.004 (0.020)
Age	0.015 ^{***} (0.005)
Family Income	0.000 (0.000)
Maternal Education	0.024 ^{***} (0.004)
PVT Score	0.012 ^{***} (0.001)
Missing PVT Score	-0.001 (0.037)
Missing Family Income	0.011 (0.016)
Missing Maternal Education	-0.105 ^{***} (0.026)
Missing State Information	0.023 (0.015)
Constant	1.038 ^{***} (0.140)
Observations	15,024
R-squared	0.044

Notes: Robust standard errors,

*** 1%,

** 5%,

* 10%.

This table reports associations between individual level sociodemographic characteristics and the Wave 1 measure of hopefulness used in tables in the main text. Adjusting for income and other family characteristics, black respondents report higher levels of hopefulness than white respondents, whereas Hispanic respondents and respondents who have “other” race/ethnic designations report lower levels of hopefulness than white respondents.

Table 3A

OLS Regression Analysis: Add Health Wave 1 and 3 Interactive Effects of Exposure to 9/11, Stratified by Wave 1 Hopefulness

Outcome	Depression Scale	Depression Scale	Depression Scale	Depression Scale
	Never Hopeful	Sometimes Hopeful	A lot Hopeful	Always Hopeful
Sample				
Post 9/11 Indicator	0.154 (0.329)	0.228 (0.206)	0.489 ^{***} (0.174)	0.650 ^{***} (0.188)
Time	-0.002 (0.002)	-0.003 ^{**} (0.001)	-0.002 ^{**} (0.001)	-0.003 ^{***} (0.001)
Black	-0.029 (0.273)	0.491 ^{***} (0.183)	0.573 ^{***} (0.156)	0.500 ^{***} (0.150)
Hispanic	0.396 (0.301)	0.098 (0.188)	0.350 ^{**} (0.169)	0.162 (0.192)
Other Race	1.010 ^{**} (0.399)	0.345 (0.239)	0.627 ^{***} (0.209)	0.884 ^{***} (0.247)
Male	-1.392 ^{***} (0.209)	-0.733 ^{***} (0.132)	-0.781 ^{***} (0.111)	-0.670 ^{***} (0.119)
Age	0.033 (0.061)	0.037 (0.038)	-0.005 (0.032)	-0.081 ^{**} (0.034)
Family Income	0.002 (0.003)	-0.004 [*] (0.002)	-0.002 (0.001)	-0.003 ^{**} (0.001)
Maternal Education	-0.030 (0.050)	-0.035 (0.031)	-0.062 ^{**} (0.027)	-0.077 ^{***} (0.029)
PVT Score	-0.013 (0.008)	-0.030 ^{***} (0.005)	-0.030 ^{***} (0.005)	-0.029 ^{***} (0.005)
Missing Maternal Education	0.288 (0.306)	0.071 (0.212)	0.405 ^{**} (0.193)	0.405 [*] (0.214)
Missing State Information	2.140 [*] (1.288)	-0.274 (1.085)	1.718 [*] (0.906)	0.017 (0.757)
Constant	7.025 ^{***} (1.607)	8.559 ^{***} (1.041)	8.746 ^{***} (0.890)	10.223 ^{***} (0.945)
Observations	1,694	3,859	5,081	4,390
R-squared	0.037	0.031	0.036	0.039

Notes: Robust standard errors,

1%,

**
5%,

*
10%.

This table reports associations from Table 2, column 2 stratified by baseline hopefulness categories (never, sometimes, a lot, always) and finds large impacts of exposure to 9/11 for those reporting “a lot” and “always” levels of hopefulness but statistically insignificant effects for those respondents reporting “never” or “sometimes” levels of hopefulness at Wave 1. Additional controls not shown: Missing PVT score indicator, Missing Family Income Information Indicator, both of which are not significant.

Table 4A

Analysis of Attrition between Wave 1 and Wave 3 Shows No Association between Wave 1 Hopefulness and Attrition

Outcome	In Wave 3
Sometimes Hopeful	0.006 (0.011)
A lot Hopeful	0.019 (0.012)
Always Hopeful	0.010 (0.009)
Black	-0.015 (0.017)
Hispanic	-0.020 (0.032)
Other Race	0.025 (0.021)
Male	-0.066*** (0.009)
Age	-0.013*** (0.003)
PVT Score	0.002*** (0.000)
Missing Family Income	-0.050*** (0.008)
Missing Maternal Education	-0.046*** (0.010)
Missing State Information	-0.137*** (0.012)
Constant	0.798*** (0.072)
Observations	20,662
R-squared	0.021

Notes: Robust standard errors,

1%,
**
5%,
*
10%.

This table reports associations between sociodemographic covariates as well as Wave 1 hopefulness as predictors of attrition in the sample by Wave 3 (a binary outcome). Males are 6.6 percentage points less likely to attrit than females. The key finding is no association between wave 1 hopefulness and attrition.

Additional controls not shown: Missing PVT score indicator, Family Income, maternal education level, each of which is not significant.

Table 5A

Analysis of Predictors of Exposure Assignment Shows No Association between Wave 1 Hopefulness

Outcome	9/11 Treatment
Sometimes Hopeful	-0.011 (0.010)
A lot Hopeful	-0.001 (0.012)
Always Hopeful	-0.007 (0.011)
Black	-0.013 (0.023)
Hispanic	0.014 (0.019)
Other Race	0.001 (0.024)
Male	0.045 ^{***} (0.006)
Age	0.005 ^{**} (0.002)
Family Income	0.000 (0.000)
PVT Score	-0.000 (0.000)
Missing Family Income	0.024 ^{**} (0.009)
Missing Maternal Education	0.020 [*] (0.010)
Missing State Information	0.076 ^{***} (0.013)
Constant	0.707 ^{***} (0.066)
Observations	15,024
R-squared	0.006

Notes: Robust standard errors,

*** 1%,

** 5%,

* 10%.

This table reports associations between sociodemographic covariates as well as Wave 1 hopefulness as predictors of exposure to 9/11 (i.e. being interviewed after 9/11/01 rather than before, which is a binary outcome). Males are 4.5 percentage points more likely to be exposed to a late interview than females. Together, the variables predict less than 1% of the variation in the exposure. The key finding is no association between wave 1 hopefulness and exposure. Additional controls not shown: Missing PVT score indicator, maternal education level, each of which is not significant.

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Table 1

Descriptive statistics add health analysis sample (N = 15,024).

Variable	Wave	Mean	Std. Dev	Min	Max
Depression Scale	3	4.64	4.09	0	26
Bothered by things	3	0.54	0.69	0	3
Could not shake off blues	3	0.34	0.66	0	3
Felt not as good	3	0.73	0.94	0	3
Distracted	3	0.62	0.75	0	3
Depressed	3	0.35	0.65	0	3
Too Tired	3	0.64	0.73	0	3
Did not enjoy life	3	0.65	0.83	0	3
Sad	3	0.51	0.68	0	3
People dislike you	3	0.27	0.56	0	3
Depression Scale	4	2.62	2.56	0	15
Time (days)	3	224.43	75.64	0	402
Indicator for Post 9/11	3	0.78	0.41	0	1
Black	All	0.22	0.41	0	1
Hispanic	All	0.16	0.37	0	1
Other Race	All	0.08	0.27	0	1
Male	All	0.47	0.50	0	1
Age	3	21.95	1.77	18	28
Family Income (\$1,000s)	1	45.91	40.20	0	990
Maternal Education	1	13.21	2.27	0	17
PVT Score	1	100.51	14.07	13	146
Missing PVT	1	0.05	0.21	0	1
Missing Family Income	1	0.24	0.43	0	1
Missing Maternal Education	1	0.10	0.30	0	1
Missing State	1	0.00	0.07	0	1
Hopefulness	1	2.81	0.98	1	
Never/Rarely Hopeful	1	0.11	0.32	0	1
Sometimes Hopeful	1	0.26	0.44	0	1
Hopeful A Lot of Time	1	0.34	0.47	0	1
Hopeful Most/All Time	1	0.29	0.45	0	1

Table 2

OLS regression analysis: Add health wave 1 and 3 main and interactive effects of exposure to 9/11.

Outcome	Depression Scale in Wave 3	Depression Scale in Wave 3
Post 9/11 Indicator	0.436 *** (0.103)	0.218 (0.146)
Sometimes Hopeful	0.049 (0.117)	0.046 (0.117)
A lot Hopeful	-0.581 *** (0.114)	-0.852 *** (0.171)
Always Hopeful	-1.003 *** (0.116)	-1.273 *** (0.172)
Post X Hopeful Scale		0.345 ** (0.163)
Time	-0.002 *** (0.001)	-0.002 *** (0.001)
Black	0.455 *** (0.088)	0.453 *** (0.088)
Hispanic	0.234 ** (0.099)	0.237 ** (0.099)
Other Race	0.667 *** (0.126)	0.669 *** (0.126)
Male	-0.802 *** (0.066)	-0.801 *** (0.066)
Age	-0.015 (0.019)	-0.014 (0.019)
Family Income	-0.002 *** (0.001)	-0.002 *** (0.001)
Maternal Education	-0.059 *** (0.016)	-0.059 *** (0.016)
PVT Score	-0.027 *** (0.003)	-0.027 *** (0.003)
Missing PVT Score	-0.084 (0.153)	-0.084 (0.153)
Missing Maternal Education	0.304 *** (0.110)	0.304 *** (0.110)
Observations	15,024	15,024
R-squared	0.048	0.048

Notes: Robust standard errors,

1%,**
5%.

Additional controls not shown: Constant, Missing State Information in Wave 1 Indicator, Missing Family Income Information Indicator.

Table 3

OLS regression analysis: Add health wave 1 and 3 interactive effects of exposure to 9/11 for nine depressive symptoms.

Outcome	1	2	3	4	5	6	7	8	9	10
Column	Depression Scale	Bothered by things	Could not shake off blues	Felt not as good	Distracted	Depressed	Too Tired	Did not enjoy life	Sad	People dislike you
Post 9/11 Indicator	0.218 (0.146)	0.051** (0.025)	-0.002 (0.024)	-0.006 (0.033)	0.068** (0.027)	0.015 (0.024)	-0.016 (0.026)	-0.003 (0.030)	0.103*** (0.025)	0.007 (0.020)
Sometimes Hopeful	0.046 (0.117)	-0.031 (0.020)	0.008 (0.019)	-0.054** (0.027)	0.004 (0.022)	0.013 (0.019)	0.030 (0.021)	-0.005 (0.024)	0.035* (0.020)	0.046*** (0.016)
A lot Hopeful	-0.852*** (0.171)	-0.078*** (0.029)	-0.069** (0.028)	-0.256*** (0.039)	-0.059* (0.032)	-0.076*** (0.028)	-0.076** (0.031)	-0.209*** (0.035)	-0.030 (0.029)	0.002 (0.024)
Always Hopeful	-1.273*** (0.172)	-0.122*** (0.030)	-0.104*** (0.028)	-0.358*** (0.039)	-0.094*** (0.032)	-0.110*** (0.028)	-0.120*** (0.031)	-0.289*** (0.035)	-0.068** (0.029)	-0.008 (0.024)
Post X Hopeful	0.345** (0.163)	0.013 (0.028)	0.052** (0.027)	0.077** (0.037)	0.001 (0.030)	0.043 (0.026)	0.070** (0.030)	0.070** (0.033)	0.030 (0.028)	-0.011 (0.023)
Observations	15,024	15,024	15,024	15,024	15,024	15,024	15,024	15,024	15,024	15,024
R-squared	0.048	0.022	0.023	0.072	0.008	0.019	0.024	0.031	0.023	0.013

Notes: Robust standard errors.

*** 1%,
** 5%,
* 10%.

Additional controls include those in previous table.