

# Communication with Fathers Moderates the Association between Emotional Reactivity and Vaping in Adolescents

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## BACKGROUND

- ❖ Electronic cigarette (e-cigarette) use and vaping among adolescents has become a major public health concern as the prevalence of vaping has increased dramatically over the past few years (U.S. Department of Health and Human Services [USDHHS], 2016; Wang et al., 2018).
- ❖ Vaping during adolescence has been associated with cigarette and marijuana use, and exposure to toxic chemicals (Dai et al., 2018; USDHHS, 2016). In addition, an association between vaping and lung disease in youth is currently being investigated (CDC press release, 2019).
- ❖ Prior research suggests high emotional reactivity among adolescents predicts substance use and abuse during adolescence (Bava & Tapert, 2010).
- ❖ However, research has shown that good relationships with parents often protects against substance use in adolescence (e.g., Tyas & Pederson, 1998).

## OBJECTIVE

To examine whether good communication with parents moderates the association between emotional reactivity and adolescent vaping.

## METHODS

### Participants:

- ❖ 397 adolescents in 7<sup>th</sup> and 8<sup>th</sup> grade from 5 public middle schools located within 70 miles of Hartford, Connecticut
- ❖ Age:  $M = 12.74$ ,  $SD = .66$ , range = 11-14 years; 57% girls; 63% Non-Hispanic White, 8% Black or African American, 10% Hispanic/Latinx, 14% multi-racial/ethnic, and 5% other

### Procedure:

- ❖ Self-report questionnaires were administered twice to students during school separated by a 6-month interval between Fall 2016 (T1) and Spring 2017 (T2)

## METHODS

### Measures:

The following validated self-report measures were administered at T1 and T2:

Construct	Measure	Scales
Emotional Reactivity	Emotional Reactivity Scale (Nock et al., 2008)	Sum Score
Parent-Adolescent Communication	Parent-Adolescent Communication Scale (Barnes & Olson, 2003)	Sum score
Vape Use	Self-reported age at first use	Coded dichotomously 0 = never vaped, 1 = vaped

### Analytic Plan:

- ❖ Hierarchical Logistic Regression Model
  - ❖ Independent Variable: Emotional Reactivity (T1)
  - ❖ Moderator Variable: Parent-Adolescent Communication (T1)
  - ❖ Dependent variable: Vape Use (T2)
  - ❖ Covariates: Age, gender, race/ethnicity, family structure, family cohesion, family support

## RESULTS

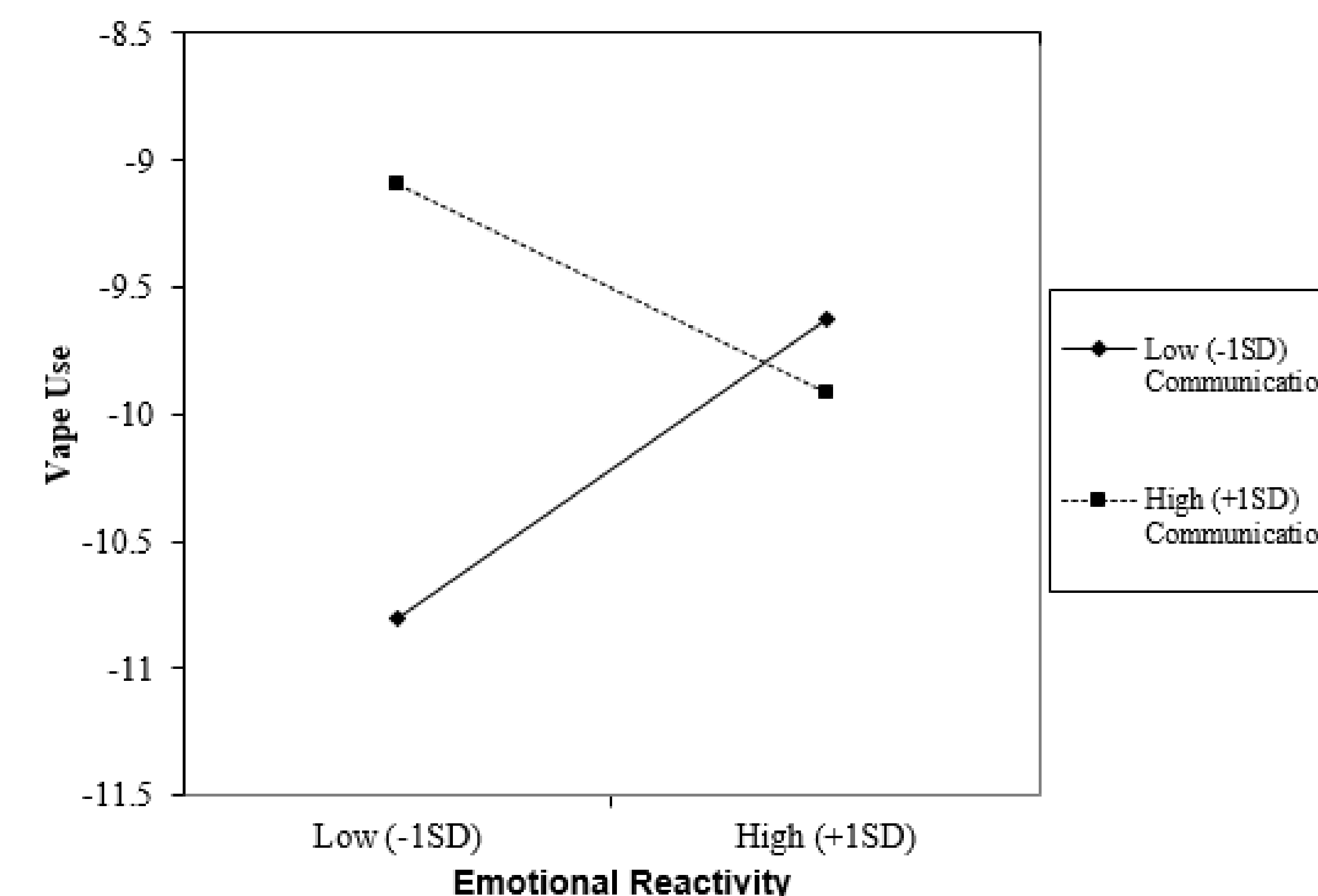
Table 1. Hierarchical Logistic Regression Results

	Vape Use (n = 397)			
	<i>b</i>	<i>SE</i>	<i>OR</i>	<i>95% CI</i>
Age	0.574	0.349	1.775	[0.895, 3.517]
Female <sup>a</sup>	0.012	0.476	1.012	[0.398, 2.573]
White, non-Hispanic <sup>b</sup>	0.428	0.494	1.534	[0.583, 4.037]
Biological parents married <sup>c</sup>	-1.323	0.485	0.266**	[0.103, 0.688]
Family cohesion	0.050	0.054	1.051	[0.947, 1.168]
Family support	-0.143	0.273	0.867	[0.508, 1.480]
Emotional reactivity (ER)	0.094	0.280	1.099	[0.635, 1.901]
Communication with Mother	-0.042	0.024	0.959	[0.915, 1.005]
Communication with Father	0.024	0.022	1.024	[0.981, 1.069]
ER*Communication with Mother	0.025	0.018	1.025	[0.989, 1.062]
ER* Communication with Father	-0.036	0.017	0.965*	[0.934, 0.997]
$\chi^2(df)$ – step 1	15.378 (9)			
$\chi^2(df)$ – step 2	4.671 (2)			

referent group \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## RESULTS

Figure 1. Emotional Reactivity Predicting Vaping, Moderated by Communication with Father



- ❖ The interaction between emotional reactivity and communication with father was significant, such that when emotional reactivity was low, higher levels of communication with father increased odds of vaping. When emotional reactivity was high, vaping did not depend on the level of communication with father.
- ❖ The interaction between emotional reactivity and communication with mother was not significant.

## CONCLUSIONS

- ❖ Findings highlight the association between emotional reactivity and adolescent vaping, moderated by communication with the father, but not the mother.
- ❖ Future studies should explore topics fathers discuss with their children as a potential explanation for why quality communication with fathers does not reduce vaping (Choi et al., 2017).
- ❖ One way to potentially help reduce the odds of vaping is to reduce adolescents' ER regardless of parental communication quality. It may be beneficial to implement research-based Social Emotional Learning (SEL) programs (e.g., Durlak et al., 2011).