

## ABSTRACT

The use of electronic cigarettes (vaping) is reported as the most commonly used tobacco product among adolescents (Wang et al., 2018), raising a concern over long term implications. In order to reduce vaping in adolescents, potential risk and protective factors should be investigated. Social media use has been associated with substance use, with greater use linked to more problematic alcohol use and frequent drug use (Ohannessian et al., 2017). In addition, peer influence in adolescence plays an important role in substance use initiation. More specifically, cyber victimization has been associated with increased frequency of substance use in adolescents (Mehari et al., 2019). Gender differences have also been found. Specifically, adolescent boys are more likely to vape than girls (Perikleous et al., 2018). Further, girls are more likely to report cybervictimization than boys (Alhaji et al., 2019). However, little is known about the relationship between social media use, social media victimization, and vaping in adolescents. Therefore, the present study aimed to examine if social media victimization could potentially moderate the relationship between social media use and vaping.

## OBJECTIVES

- ❖ To examine the association between social media use and vaping among adolescents.
- ❖ To examine whether social media victimization moderates the association between social media use and vaping among adolescents.
- ❖ To examine differences in the association between social media use, social media victimization, and vaping, by gender.

## METHODS

### Participants:

- ❖ 432 early adolescents in 7<sup>th</sup> and 8<sup>th</sup> grade from public middle schools in the New England area.
- ❖ The sample included adolescents who reported being victimized on social media within the past 6 months.
- ❖ 66% girls (*M*<sub>age</sub> = 12.74, *SD* = 0.64), 34% boys (*M*<sub>age</sub> = 12.73, *SD* = 0.64), range = 11-14 years.
- ❖ 60% Non-Hispanic White, 7% Black or African American, 13% Hispanic/Latinx, 17% multi-racial, and 3% other.

### Procedure:

- ❖ Self-report questionnaires were administered twice to students during school separated by a 6-month interval between the fall of 2016 (T1) and the spring of 2017 (T2).

## METHODS

### Measures:

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

Construct	Measure	Scale
Social Media Use	Technology Use Questionnaire (TUQ; Ohannessian, 2009) (Facebook, Instagram, Snapchat, Twitter)	Average frequency of social media use of the four applications
Social Media Victimization	Social Network Peer Experience Questionnaire (SN-PEQ; Landoll, La Greaca, & Lai, 2013)	An average score of 6 items which assessed social networking victimization ( $\alpha = .81$ )
Vaping	First Use of Substances Questionnaire – Smoked electronic vaporizers or e-cigarettes (Ohannessian, Finan, Schulz, & Hesselbrock, 2015)	Coded as yes or no for ever use (0 = no, 1 = yes)

**Analytic Plan:** Hierarchical Logistic Regression Model. Step 1 included covariates and main effects for social media use and social media victimization. Step 2 included the interaction term between social media use and social media victimization.

- ❖ Independent Variable: TUQ Score (T1)
- ❖ Dependent Variable: Vape Use (T2)
- ❖ Moderator Variable: Social Media Victimization (T1)
- ❖ Covariates: Gender, Age, Race/Ethnicity (T1)

## RESULTS

**Table 1. Logistic Regression Analysis Results, Separately by Gender**

	Boys ( <i>n</i> = 146)			Girls ( <i>n</i> = 286)		
	B	SE	OR [CI]	B	SE	OR [CI]
Age T1	0.27	0.52	1.31 [0.47-3.64]	0.32	0.37	1.38 [0.67-2.85]
White, non-Hispanic <sup>a</sup>	-0.76	0.66	0.47 [1.3-1.71]	-0.07	0.51	0.93 [0.34-2.54]
SES	-0.03	0.24	0.97 [0.61-1.56]	-0.24	0.19	0.79 [0.54-1.15]
Social Media Use	0.23	0.21	1.25 [0.84-1.87]	0.26	0.17	1.30 [0.93-1.83]
SM Victimization	1.06	1.07	2.89 [0.36-23.54]	0.35	0.44	1.41 [0.60-3.37]
SM Use*Victimization	-1.36	0.45	0.26* [0.09-0.74]	0.10	0.19	1.11 [0.77-1.60]
$\chi^2$ (df) – step 1	2.03 (5)			9.70 (5)		
$\chi^2$ (df) – step 2	8.61(1)**			0.32 (1)		

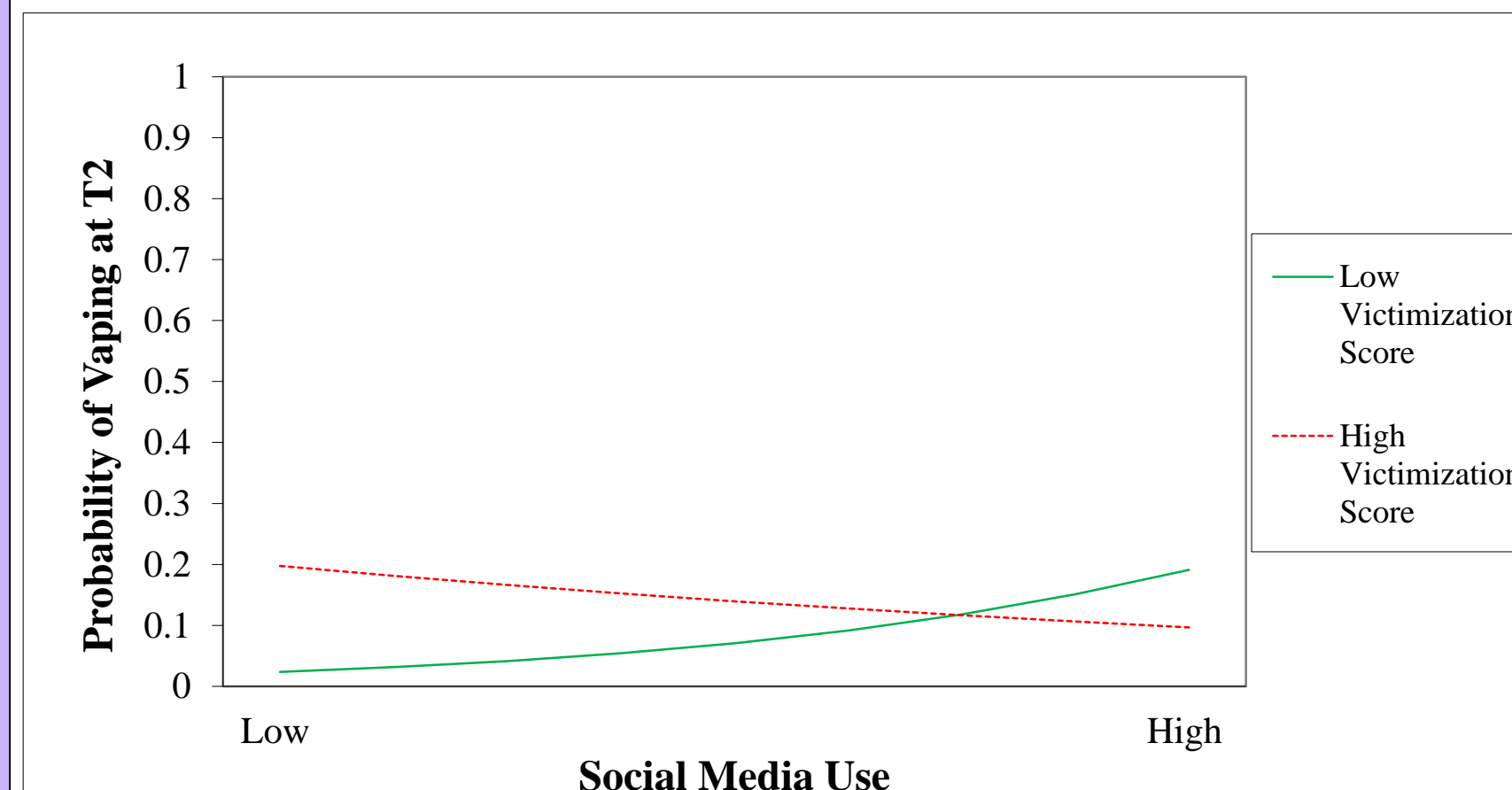
Note. SM = Social Media. <sup>a</sup>non-White is the referent group.  
 \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

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## RESULTS

**Figure 1. Association between Social Media and Vape Use: The Moderating Role of Social Media Victimization for Boys**



- ❖ The main effect of social media use on vaping was not significant for boys and girls.
- ❖ The interaction between social media use and victimization was significant for adolescent boys, such that when victimization was high, the amount of social media use did not predict odds of vaping. However, when victimization was low, greater social media use was associated with greater odds of vaping.
- ❖ The interaction between victimization and frequency of social media use was not significant for girls.

## CONCLUSIONS

- ❖ Findings indicated that social media victimization moderated the association between social media use and vaping for adolescent boys only.
- ❖ For boys who reported lower victimization, the amount of social media use was associated with higher odds of vaping, raising concerns over how social media use may be related to vaping initiation for those who report victimization.
- ❖ Future research is needed to examine why social media victimization may be associated with increased odds of vaping for adolescent boys.
- ❖ For adolescent boys who report social media victimization, reducing social media use may be beneficial in reducing odds of vaping.

