E-cigarette Use Susceptibility among Youth in Mexico: The Roles of Remote Acculturation, Parenting Behaviors, and Internet Use Frequency

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Abstract

Introduction: Adolescent electronic cigarette (e-cigarette) use is increasing worldwide, raising concerns about its impact on youth development. Remote acculturation may influence the e-cigarette use cognitions of youth in Mexico by influencing their media use, thereby contributing to their e-cigarette use susceptibility. This study examined whether remote acculturation was associated with youth internet use frequency, and whether youth internet use frequency, in turn, was associated with youth e-cigarette use susceptibility. Because parenting behaviors can relate with lower tobacco and media use (e.g., internet use), this study also examined the associations of parental media restrictions and mother's parenting practices with youth internet use frequency and e-cigarette use susceptibility.

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Methods: Data came from a school-based survey with middle school students in Mexico who had never tried e-cigarettes (N=6004; 52.6% female; Mage=13.07 years). Students completed measures of remote acculturation, parental media restrictions, mother's parenting practices, internet use, and e-cigarette use susceptibility.

Results: Structural equation analyses suggest that U.S. American cultural orientation may increase youth e-cigarette use risk by way of higher youth internet use. Mexican cultural orientation and parental media restrictions may reduce youth e-cigarette use risk by way of lower youth internet use.

Conclusions: Preventive interventions to reduce Mexican youths' intention to try e-cigarettes could benefit from efforts to reduce youth internet use and from media literacy interventions that inform parents and youth about the influence of internet use on youth e-cigarette use.

Keywords

1. Introduction

Adolescent electronic cigarette (e-cigarette) use is increasing rapidly worldwide, raising concerns about its impact on youth development (Vogel, Ramo, & Rubinstein, 2018). E-cigarettes are advertised as less harmful than combustible cigarettes (Berg et al., 2015), but they may lead to nicotine addiction (Case et al., 2018), combustible cigarette smoking (Lozano, Arillo-Santillán, Barrientos-Gutíerrez, Reynales Shigematsu, & Thrasher, 2019), and impaired brain development (Vogel et al., 2018), disrupting healthy youth development. An increased understanding of risk factors for e-cigarette use can inform interventions to reduce adolescent e-cigarette use.

Globalization (i.e., the flow of people, goods, and ideas across cultures; Jensen & Arnett, 2012) may influence youth e-cigarette use through remote acculturation - a modern form of non-immigrant, globalization-based acculturation that can occur across distance (Lorenzo-Blanco, Arillo-Santillán, Unger, & Thrasher, 2019; Ferguson et al., 2018). U.S. media and culture is widely disseminated to youth in Mexico through media channels (e.g., internet, television, movies, social media), impacting Mexican youth's tobacco use cognitions and behaviors (Barrientos-Gutierrez et al., 2015; Lorenzo-Blanco et al., 2017; Stepler & Brown, 2013). Although e-cigarette importation, distribution, and advertising are prohibited in Mexico (Articulo, 2018), the prevalence of middle school student e-cigarette trial (19%) and use (12%) in Mexico (Barrientos-Gutierrez et al., 2019) is comparable to that of the U.S. (13.5%; 10.5%), where e-cigarettes are legal and minimally regulated (Gentzke et al., 2019; U.S. Department of Health and Human Services, 2016). Youth in Mexico may learn about e-cigarettes from non-Mexican media sources, particularly online and social media platforms that can violate e-cigarette marketing bans like those in Mexico (Drame et al., 2018). Remote acculturation may influence youth internet use behaviors, thereby contributing to youth e-cigarette use risk. Remote acculturation is associated with greater combustible cigarette use risk among youth in Mexico (Lorenzo-Blanco et al., 2019). Much less is known whether and how it influences e-cigarette use risk.

This study investigates the association between remote acculturation and e-cigarette use susceptibility among youth in Mexico and examines internet use frequency as a mediator. Because parental media restrictions and mother's parenting practices (i.e., demandingness and responsiveness) are associated with youth media (Samaha & Hawi, 2017) and tobacco use (Peña et al., 2017), we also examine associations of parental media restrictions and mother's parenting practices with internet use frequency and e-cigarette use susceptibility (Figure 1).

1.1. Remote Acculturation and Tobacco Use

Remote acculturation is a globalization-based acculturation that occurs across distance and without direct contact between cultures (Ferguson & Bornstein, 2015). Evidence for remote acculturation comes from research with adolescents in several countries. In Jamaica, one third of adolescents identified with U.S. American culture (Ferguson & Bronstein, 2015). These youth reported stronger preferences for U.S. entertainment than youth who identified with Jamaican culture. In Thailand, 30% of adolescents felt attracted to U.S. culture, which was associated with greater tobacco use risk (Goldberg & Baumgartner, 2002). Among youth in Mexico (Thrasher et al., 2009) and Egypt (Islam et al., 2007), exposure to U.S./ Western media and preference for watching movies in English (Lorenzo-Blanco et al., 2017) were associated with more positive smoking-related cognitions.

1.2. Remote Acculturation and Tobacco Use among Youth in Mexico

Similar to immigration-based acculturation, remote acculturation has been conceptualized as a bi-dimensional process whereby youth can be oriented toward Mexican and/or U.S. American culture (Lorenzo-Blanco et al., 2019). Among U.S. Hispanic adolescents, U.S. American cultural orientation is associated with higher and Hispanic cultural orientation is associated with lower cigarette smoking risk (Lorenzo-Blanco et al., 2015). Among adolescents in Mexico, U.S. American cultural orientation is associated with higher and Mexican cultural orientation is associated with lower cigarette smoking risk (Lorenzo-Blanco et al., 2019). Because the correlates of youth e-cigarette use are similar to those of combustible cigarettes, remote acculturation may influence youth e-cigarette use in Mexico (Thrasher et al., 2016).

1.3. Media Use and Adolescent Tobacco Use

Media use might mediate the association between remote acculturation and youth e-cigarette risk (Ferguson et al., 2018). Media communications (e.g., appealing images of e-cigarette use on the internet) foster positive e-cigarette use expectations (Duke et al., 2014). Media use and media exposure to tobacco products influence youth tobacco use in the U.S. (Nicole, Snell, Morgan, & Andrew, 2017) and Mexico (Thrasher et al., 2016). In the U.S., e-cigarette advertisements in media were associated with higher youth e-cigarette use and susceptibility (Nicole et al., 2017). In Mexico, use of media technologies such as the internet were associated with higher youth e-cigarette use, pointing to internet use as a determinant of youth e-cigarette use in Mexico (Thrasher et al., 2016). Less is known how remote acculturation and parenting behaviors influence youth internet use in Mexico.

1.4. Parenting Behaviors, Adolescent Media and Tobacco Use

Parents influence adolescents' media and tobacco use (Mejia et al., 2016). Parental media restrictions (Valkenburg, Krcmar, Peeters, & Marseille, 1999) involve setting rules on the type, duration, and timing of media content exposure. Parental media restrictions can lead to lower tobacco, alcohol, and drug use (Mejia et al., 2016).

Parents also influence adolescents' media (Sargent et al., 2002) and tobacco use (Lorenzo-Blanco, Bares, & Delva, 2011) through their parenting practices, such as parental demandingness (i.e., monitoring of behavior) and responsiveness (i.e., emotional warmth and connection). Parenting practices are associated with lower media access (Mejia et al., 2016), more negative attitudes and lower susceptibility to cigarettes (Lorenzo-Blanco et al., 2011), and less cigarette smoking (Peña et al., 2017) among Latin American youth. This study examines associations of mother's parenting practices and parental media restrictions with youth internet use frequency and e-cigarette use susceptibility in Mexico.

1.5. Current Study

Our conceptual model (Figure 1) leads from Mexican and U.S. American cultural orientation and parental factors (media restrictions, mother's parenting practices) to internet use, and then to youth e-cigarette use susceptibility. Because mother's parenting practices can influence youth e-cigarette use cognitions directly, the model also leads directly from mother's parenting practices to e-cigarette use susceptibility. Also, because family affluence, sensation seeking, age, and gender are associated with remote acculturation, media and youth tobacco use (Lorenzo-Blanco et al., 2019; Thrasher et al., 2014;Wellman et al., 2016), we included these as correlates in our conceptual model and controlled for their influence in our analyses. We tested this model with survey data from adolescents in Mexico who had never tried e-cigarettes. We conceptualized remote acculturation as a bi-dimensional process consisting of U.S. American and Mexican cultural orientations (Lorenzo-Blanco et al., 2019). We conceptualized youth media use in terms of internet use frequency (Barrientos-Gutierrez et al., 2019). We assessed mother's demandingness and responsiveness because prior studies indicate that mothers' parenting practices have a greater impact on youth tobacco use compared to fathers' behaviors (Peña et al., 2017). We also investigated internet use frequency as a mediator of the relationships from a) Mexican and U.S. American cultural orientations to e-cigarette use susceptibility, and b) from parental media restrictions and parenting practices (i.e., demandingness and responsiveness) to e-cigarette use susceptibility. We propose the following hypotheses:

1. Higher U.S. American cultural orientation will be associated with higher internet use frequency, and higher Mexican cultural orientation will be associated with lower internet use frequency.

2. Higher parental media restrictions and higher parenting practices will be associated with lower internet use frequency.

3. Higher internet use frequency will be associated with greater e-cigarette use susceptibility, and higher parenting practices will be associated with lower e-cigarette use susceptibility.

> **4.**   Internet use frequency will mediate the associations of remote acculturation (U.S. American and Mexican cultural orientations) and parenting behaviors (media restrictions and parenting practices) with e-cigarette use susceptibility.

2.   Methods

2.1.   Sample and Procedure

Data came from a survey on remote acculturation, media, and tobacco use among middle-school students enrolled in public schools in the three largest cities in Mexico (Mexico City, Guadalajara, Monterrey; Thrasher et al., 2016). In October-November 2016, 8718 middle school students in 57 schools completed a self-administered survey. Because of the cross-sectional nature of the study and concerns regarding the temporal ordering of remote acculturation, parenting, media and e-cigarette use, we excluded students who had tried e-cigarettes, resulting in an analytic sample of 6004 never e-cigarette users. The analytic sample was 52.6% female, and the mean age was 13.07 years (SD=0.48, range 12–13).

2.2.   Measures

Measures were administered in Spanish, after using committee translation methods (Harkness, 2003) from original English language questions. Translated items were further pretested and adjusted by conducting cognitive interviews with adolescents in Mexico (Willis, 2005).

2.2.1.   Remote acculturation—was assessed with eight questions (Lorenzo-Blanco et al., 2019) modeled after the short form of the Revised Acculturation Rating Scale for Mexican Americans-II (Cuellar, Arnold, & Maldonado, 1995), which measures orientations towards both U.S. American and Mexican culture. Four items measured U.S. American cultural orientation (e.g., I like watching movies, TV programs and series that are from the United States; α=.63) and four items measured Mexican cultural orientation (e.g., I like watching movies, TV programs and series that are from Mexico; I enjoy eating α=.62). Response options ranged from 1 (*Totally Disagree)* to 5 (*Totally Agree*).

2.2.2.   Parental media restrictions—were assessed with three questions adapted from the Kaiser Foundation Media and Health study (Rideout, Foehr, & Roberts, 2010). Students reported whether their parents had any rules regarding students' use of video games, TV, and/or internet. Response options were 1 (*Yes*) and 0 (*No*). Items were summed and higher scores represent greater media access.

2.2.3.   Mother's parenting practices—were assessed with questions on maternal responsiveness and demandingness from Jackson's Authoritative Parenting Index (Jackson, Henriksen, & Foshee, 1998). Three items assessed responsiveness (e.g., "She makes me feel better when I am upset;" α=.81) and three assessed demandingness (e.g, "She tells me what time I have to be home;" α=.72). Response options ranged from 1 *(Totally Disagree)* to 5 (*Totally Agree*). We combined the items of the two parenting scales into one latent construct of "Mother's Parenting Practices" because of their conceptual overlap and high correlation

(r=.561, p< .001); and created a composite score by using the mean of the six items (α=.82; Sargent et al., 2006).

2.2.4. Internet use frequency—was assessed with five questions (Barrientos-Gutierrez et al., 2019): 1. "How frequently do you seek information via the internet?," 2. "How frequently do you share music, video or audio files via the internet?," 3. "In the past 30 days, how frequently did you connect to social media such as Facebook, Snapchat, Twitter, or Instagram?," 4. "In the past 30 days, how frequently did you watch or download movies on paid internet sites such as Netflix, iTunes, or Clarovideo?," and 5. "In the past 30 days, how frequently did you watch or download movies on free internet sites such as Vidocio, Veocine, Divxonaline or YouTube?" Response options ranged from 0 *(Never)* to 4 *(Very Frequently –At least Once a Day)*. Items were summed and higher scores represent more frequent internet use (α=.65).

2.2.5. E-cigarette use susceptibility—the absence of a firm commitment not to use tobacco products, is a consistent predictor of tobacco use among non-using youth (Lozano et al., 2019), and was assessed with one question: "Do you think you will use an e-cigarette in the next twelve months?" Response options ranged from 1 *(Definitely Not)* to 4 *(Definitely Yes)*. As recommended by Pierce and colleagues (1996) and due to its skewed distribution, we recoded this question to 0 *(Definitely Not/Nonsusceptible)* and 1 *(Anything Else/Susceptible)*.

2.2.6. Covariates.—*Age* ranged from 1 *(12 years or less) to* 6 *(17 year or more)*.

Gender was coded as 1=*female* and 0=*male*.

Sensation seeking was assessed with the Brief Sensation Seeking Scale-4 (BSSS-4; Stephenson, Hoyle, Palmgreen, & Slater, 2003) which has good measurement properties among Mexican youth (Thrasher et al., 2009).

Family affluence was assessed with the Family Affluence Scale (Boyce, Torsheim, Currie, & Zambon, 2006) which consists of four items: 1. How many cars or trucks does your family own?, 2. Do you have your own room?, 3. In the past year, how often have you gone on vacation with your family?, and 4. How many computers are in your home? Response options for question 1 included 0 (*None*), 1 (*One*), and 2 (*2 or more*). Response options for question 2 included 0 (*No*) and 1 (*Yes*). Response options for questions 3 and 4 ranged from 0 (*None*) and 3 (*3 or more*). Responses were summed. Higher scores represent higher family affluence.

Social network e-cigarette use was assessed by asking whether any of the students' relatives who lived at home used e-cigarettes (0=*No* or 1=*Yes)*. Adolescents also reported how many of their five best friends used e-cigarettes, with responses ranging from 0 *(None)* to *5 (5 out of 5 friends)*. We recoded this question to 0 (*None*) and 1 (*At least one friend*) due to its skewed distribution.

Lifetime cigarette smoking was assessed with one question**:** "Have you ever tried cigarette smoking, even one or two puffs?" (0=*No* or 1=*Yes*). We controlled for student's lifetime

cigarette smoking because prior cigarette smoking increases adolescents' risk for e-cigarette use initiation (Barnett, Soule, Forrest, Porter, & Tomar, 2015).

2.7. Analytic Plan

We used Mplus Version 8.2 (Muthén & Muthén, 1998–2012). We estimated structural equation models using weighted least squares estimation (WLSMV), which treats dependent variables as categorical with the Mplus command categorical=X. It provides standardized probit regression coefficients, which can be interpreted similarly to standardized beta coefficients (Azen & Walker, 2011). WLSMV includes all available data and is superior to other missing data techniques in terms of aspects of model estimation, bias, and efficiency, and it is relatively equivalent to multiple imputation techniques (Asparouhov & Muthén, 2010).

To test hypotheses 1–4, we first estimated the measurement model for the latent variables to ensure that the psychometric properties of the measures were adequate (Anderson & Gerbing, 1988). Because using weighted least squares estimation to estimate the effect of latent factors on dichotomous outcome variables often leads to model nonconvergence, we used these latent factor scores as observed predictor variables in subsequent analyses (Ram et al., 2005). We evaluated model fit using the comparative fit index (CFI .95), root mean square error of approximation (RMSEA .05; Kline, 2011), and chi-square test of model fit (χ^2 >.05). We report but did not consider the p-value of the chi-square test because a large sample size tends to inflate the chi-square value, making it difficult to achieve a non-significant chi-square statistic (Little, Cunningham, Shahar, & Widaman, 2002).

To test hypothesis 5, we conducted mediation analyses with the Mplus command (MODEL=INDIRECT) which calculates confidence intervals and assumes that mediation occurs if the confidence interval does not include zero (Muthén & Muthén, 1998–2012).

2.8. Results

2.8.1. Descriptive Statistics—Table 1 displays descriptive statistics. Approximately 26% of youth reported that they would try an e-cigarette within the next 12 months, with girls reporting greater e-cigarette susceptibility than boys (*p<.001).* Table 2 shows bivariate correlations.

2.8.2. Structural Equation Modeling (SEM)—We estimated a measurement model including all latent variables with more than two indicators (i.e., Mexican cultural orientation, U.S. American cultural orientation, parental media restrictions, parenting practices, and internet use frequency). We specified correlated error terms for items with very similar wording (e.g., U.S. movies with Mexican movies; U.S. music with Mexican music; Bollen, 2014). This measurement model produced good fit [χ^2 (188)=1590.296, *p<.001*; *CFI*=.950; *RMSEA*=.035, 90% *CI* (.034 –.037)].

We used path analyses to estimate our hypothesized model (Figure 1) employing the latent factor scores derived from the measurement model. The structural path model provided excellent fit [χ^2 (6)=56.261, *p<.001*; *CFI*=.987; *RMSEA*=.038, 90% *CI* (.029 –.047)]. Covariates include age, gender, sensation seeking, and family affluence in the paths leading

to internet use frequency; and lifetime cigarette smoking, peer-and family e-cigarette use in the paths from mother's parenting practices and internet use frequency to e-cigarette susceptibility (Figure 1). Mexican cultural orientation (β=−.13, p<.001) and parental media restrictions (β=−.12, p<.001) were associated with lower internet use frequency (Figure 2). U.S. cultural orientation was associated with higher internet use frequency (β=.61, p<.001), which, in turn, was associated with greater e-cigarette susceptibility (β=.12, p<.001). Mother's parenting practices were associated with lower e-cigarette susceptibility (β=−.07, p<.05). The path model accounted for the following proportions of variance: internet use frequency (46.5%, p<.001) and e-cigarette use susceptibility (15%; p<.001).

2.8.3.   Mediation Analyses—We examined whether internet use frequency mediated the associations from Mexican cultural orientation, U.S. cultural orientation, parental media restrictions, and mother's parenting practices to greater e-cigarette use susceptibility. Internet use frequency mediated the associations from Mexican cultural orientation (β=−.02, p<.001, 95% CI [−.021, −.010]), U.S. cultural orientation (β=.08, p<.001, 95% CI [.052, .098]), mother's parenting practices (β=−.07, p<.05, 95% CI [−.005, .001]), and parental media restrictions (β=−.02, p<.001, 95% CI [−.020, −.010]) to greater e-cigarette use susceptibility.

2.9.   Discussion

This study examined the frequency of youth internet use as a mechanism by which attitudes about cultural products and notions related to nationalism may influence beliefs about e-cigarettes among youth in Mexico. We examined the roles of parental media restrictions and mother's parenting practices on youth internet use frequency, and e-cigarette use susceptibility. As hypothesized, higher U.S. American cultural orientation was associated with higher internet use, which in turn was associated with greater e-cigarette use susceptibility. Higher Mexican cultural orientation was associated with lower internet use, which in turn was associated with lower e-cigarette use susceptibility. These findings extend previous research (Lorenzo-Blanco et al., 2019) by identifying two mediated pathways by which remote acculturation may influence youth tobacco use and e-cigarette use in particular: the pathways from U.S. and Mexican cultural orientations to e-cigarette use susceptibility by way of youth internet use.

Consistent with prior research (Mejia et al., 2016), higher parental media restrictions were associated with lower youth internet use, and lower youth internet use was associated with lower e-cigarette use susceptibility. These results may point to one area for interventions to reduce youth e-cigarette use in Mexico–parenting interventions that encourage parental media restrictions. Because it may be difficult for parents to restrict youth internet use outside the home, interventions may also benefit from media literacy (Ferguson, Fiese, Nelson, & Meeks Gardner, 2019) that informs parents and youth about how media influences youth e-cigarette use, and that equip parents with skills to discuss internet use with their children.

Contrary to our expectations and prior research (Mejia et al., 2016), mother's parenting practices were not associated with internet use. General parenting practices (e.g.,

demandingness, responsiveness) may not suffice to prevent youth internet use; it may be necessary for parents to limit youth internet use explicitly. As hypothesized, mother's parenting practices were associated with lower youth e-cigarette use, supporting prior research on the role of parenting in youth tobacco use (Peña et al., 2017). This study extends this line of research to youth e-cigarette use in Mexico and may suggest that parenting interventions to prevent youth e-cigarette use could promote maternal responsiveness and demandingness.

4.1. Limitations

The cross-sectional design does not allow causal inferences. Some of the observed associations might operate in the opposite direction or bidirectionally. However, our findings are consistent with longitudinal studies (Lorenzo-Blanco et al., 2015; Mejia et al., 2016). This study focused on general youth internet use but not specific media content. Future studies could identify specific media content (e.g., Mexico vs. U.S. produced media content) that influences e-cigarette susceptibility. This study focused on youth remote acculturation but did not assess parents' cultural orientations, which might influence parenting behaviors, media and youth tobacco use (Ferguson et al., 2018). Our measure of remote acculturation assessed cultural practices and national pride. Future studies could also investigate cultural values and identities (Lorenzo-Blanco et al., 2015). Moreover, our measure of remote acculturation asked youth to indicate whether they "like" U.S. American and Mexican music, food, TV programs/movies. These questions do not capture actual exposure or engagement with U.S. American or Mexican products. Similarly, asking youth about whether they "like" being Mexican or would "like" to be from the U.S. does not capture youths' actual identity. Future studies could employ measures that capture youths' actual exposure to U.S. American and Mexican music, food, and TV programs/movies and develop; and their actual national/ethnic identity. Our results might not generalize to rural youth or youth who have used e-cigarettes in the past. Lastly, we treated family affluence, sensation seeking, sex, and age as control variables and future studies could investigate the moderating role of these variables in the associations of internet use to e-cigarette use susceptibility.

4.2. Conclusion

This study provides important information about the role of remote acculturation, media, and parenting behaviors on youth e-cigarette use susceptibility in Mexico. It extends research on youth internet use, parenting behaviors, and combustible cigarette use to e-cigarette use susceptibility. Information from this study can inform youth e-cigarette use interventions in Mexico.

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Highlights

- This study examined the impact of remote acculturation, media use, and parenting behaviors on e-cigarette use susceptibility among youth in Mexico.

- Acculturation to U.S. culture was associated with higher and acculturation to Mexican culture was associated with lower e-cigarette use risk by way of youth media use.

- Parental media restrictions were associated with lower e-cigarette use risk by way of youth media use.

- Parenting practices were associated with higher youth e-cigarette use risk but not with youth media use.

- Preventive interventions to reduce youth e-cigarette use in Mexico could target media use reduction and media literacy.
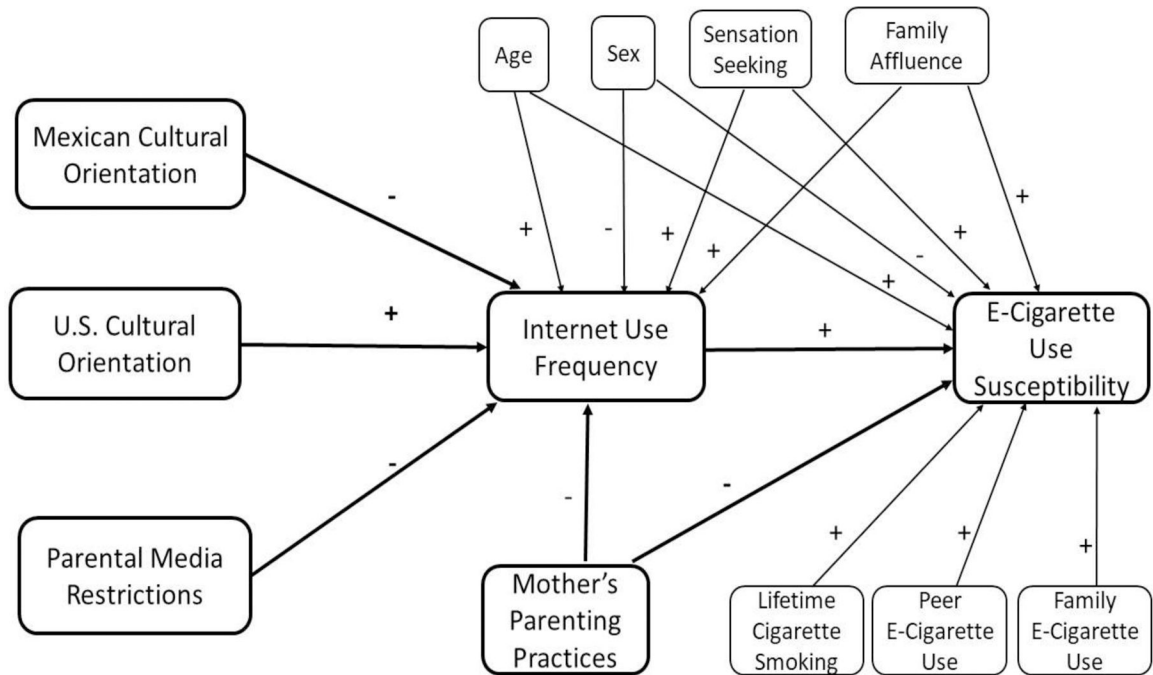
Figure 1.
Conceptual Model.

Note. Age, sex, sensation seeking, and family affluences are conceptualized as control variables in the paths leading to internet use frequency and e-cigarette use susceptibility. Lifetime cigarette smoking, peer-and family e-cigarette use are conceptualized as control variables in the paths leading from parenting and internet use frequency to e-cigarette use susceptibility.
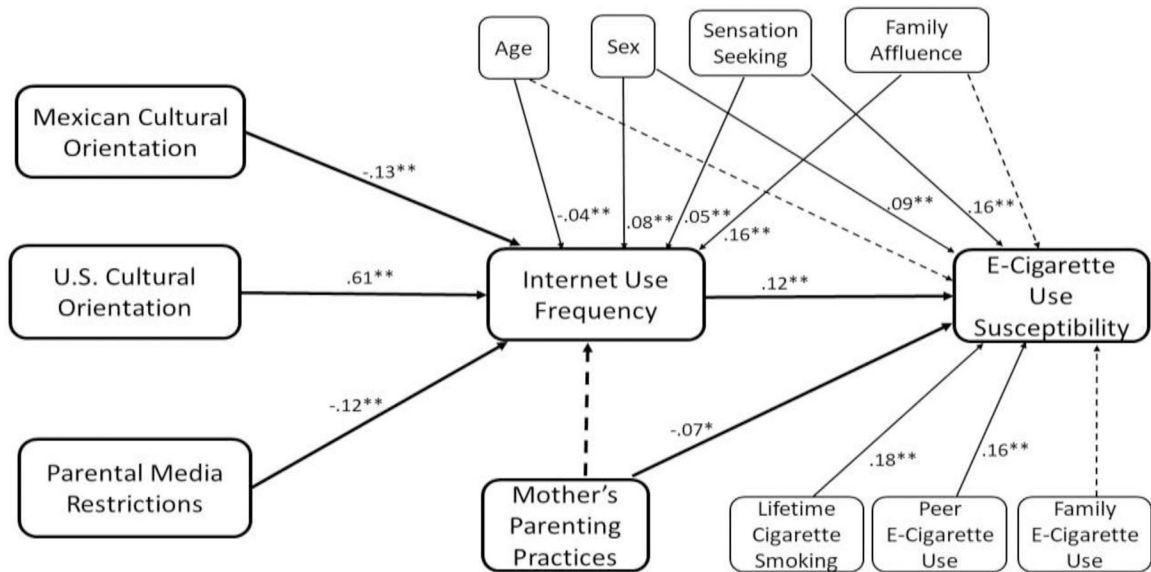
Figure 2.
SEM results.

Note. *Dashed lines indicate non-significant paths.* Age, sex, sensation seeking, and family affluences are conceptualized as control variables in the paths leading to internet use frequency and e-cigarette use susceptibility. Lifetime cigarette smoking, peer-and family e-cigarette use are conceptualized as control variables in the paths leading from parenting and internet use frequency to e-cigarette use susceptibility.

Table 1.

Descriptive Characteristics for Overall Sample, Girls, and Boys

Variables	Overall Sample (N = 6004)		Girls (n = 3158)		Boys (n = 2850)		
	N(%) or M (SD)		N(%) or M (SD)		N(%) or M (SD)		
Age	13.07	(.48)	13.05	(.46)	13.09	(.49)	*
Sensation Seeking	3.76	(.88)	3.71	(.87)	3.81	(.88)	**
Family Affluence	6.00	(3.29)	5.95	(3.35)	6.05	(3.22)	
Mexican Cultural Orientation	4.19	(.68)	4.20	(.66)	4.18	(.70)	**
U.S. American Cultural Orientation	3.73	(.82)	3.77	(.81)	3.67	(.83)	**
Parental Media Restrictions	1.40	(1.12)	1.46	(1.11)	1.33	(1.13)	**
Mother's Parenting Practices	4.16	(.78)	4.16	(.80)	4.17	(.76)	
Internet Use Frequency	0.34	(0.48)	2.89	(.89)	2.73	(.93)	**
E-Cigarette Susceptibility	1587	(26.4)	924	(29.3)	663	(23.3)	**
Lifetime Cigarette Smoking	1288	(21.40)	675.00	(21.4)	613	(21.5)	
Peer E-cigarette Use	1504	(24.10)	844.00	(26.9)	660	(23.5)	*
Family E-cigarette Use	535	(8.9)	278.00	(8.8)	257	(9.0)	

Note:

*
p < 0.05.

**
p < 0.01.

Categorical measures: E-Cigarette Susceptibility, Lifetime Cigarette Smoking, Peer E-cigarette Use, Family E-cigarette Use

Table 2.

Bivariate Correlations Between All Study Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Sex	1												
2 Age	−.04 **	1											
3 Sensation Seeking	−.05 **	.02	1										
4 Family Affluence	−.01	−.07 **	.03	1									
5 Mexican Cultural Orientation	.02	.01	.12 **	−.06 **	1								
6 U.S. American Cultural Orientation	.06 **	−.04 **	.20 **	.15 **	.10 **	1							
7 Parental Media Restrictions	.06 **	−.04 **	−.15 **	.02	.10 **	−.05 **	1						
8 Mother's Parenting Practices	−.00	−.04*	−.08 **	.06 **	.21 **	.09 **	.26 **	1					
9 Internet Use Frequency	.09 **	−.08 **	.16 **	.28 **	−.04 **	.28 **	−.08 **	.01	1				
10 E-cigarette Use Susceptibility	.07 **	.00	.17 **	.02	−.02	.02	−.13 **	−.13 **	.11 **	1			
12 Lifetime Smoking	.00	.08 **	.18 **	−.08 **	−.00	−.05 **	−.09 **	−.15 **	.01	.24 **	1		
13 Peer E-cigarette Use	.05 **	−.01	.10 **	.04 **	.02	.03*	−.01	−.04 **	.08 **	.20 **	.07 **	1	
14 Family E-cigarette Use	.00	.00	.06 **	.03*	−.01	.02	−.01	−.03*	.01	.04 **	.04 **	.07 **	1

Note:

*
p < 0.05.

**
p < 0.01.

Categorical Measures: E-Cigarette Susceptibility, Lifetime Cigarette Smoking, Peer E-cigarette Use, Family E-cigarette Use