

Spanish version of the susceptibility to e-cigarettes scale among Latino adolescents

Francisco Cartujano-Barrera¹, Ruthmarie Hernández-Torres¹, Arlette Chávez-Iñiguez¹, Rafael H. Orfin¹, Isabel D. Fernandez¹, Patricia M. Rivera¹, Ana P. Cupertino¹

Dear Editor,

According to the 2021 U.S. National Youth Tobacco Survey, 19.4% of middle and high school students reported ever use of electronic cigarettes (e-cigarettes)¹. As noted in the 2022 U.S. Food and Drug (FDA) Administration's Research Priorities, pressing issues include 'innovative measures, methods, or study designs to assess the likely impact of electronic nicotine delivery systems (ENDS) and heated tobacco products (HTPs), other novel products, and/or potential modified risk tobacco products on relevant outcomes, including precursors to tobacco use (e.g. perceptions, intentions, susceptibility) ...'². Key to this work is the need for language-appropriate and validated instruments.

The susceptibility to e-cigarettes scale assesses behavioral intentions, peer influence, and self-efficacy in regard to e-cigarette use (vaping)³. Specifically, this scale consists of the questions: 'have you ever been curious about using e-cigarettes?', 'do you think you will use e-cigarettes in the next year?', and 'if one of your best friends were to offer you an e-cigarette, would you use it?'³. Response options include: 'not at all curious', 'a little curious', 'somewhat curious', or 'very curious' for the first item, and 'definitely not', 'probably not', 'probably yes', or 'definitely yes' for the other two items³. Emergent literature has demonstrated that susceptibility to e-cigarettes, defined as the absence of a firm decision not to use e-cigarettes, is a strong independent predictor of future vaping³⁻⁵. Moreover, susceptibility to e-cigarettes has been proposed as an outcome for vaping prevention efforts⁶.

Despite the wide use of the susceptibility to e-cigarettes scale, to the best of our knowledge, there is no version in Spanish. Moreover, the psychometric properties of the scale (e.g. the internal consistency reliability) have not been established among Spanish speakers, inhibiting the confident use of the instrument in this population.

Table 1. Spanish translation of the susceptibility to e-cigarettes scale

Questions	Responses			
Have you ever been curious about using e-cigarettes?	Not at all curious	A little curious	Somewhat curious	Very curious
¿Alguna vez has sentido curiosidad por usar cigarrillos electrónicos?	Nada curioso(a)	Un poco curioso(a)	Algo curioso(a)	Muy curioso(a)
Do you think you will use e-cigarettes in the next year?	Definitely yes	Probably yes	Probably not	Definitely not
¿Crees que usarás cigarrillos electrónicos el próximo año?	Definitivamente sí	Probablemente sí	Probablemente no	Definitivamente no
If one of your best friends were to offer you an e-cigarette, would you use it?	Definitely yes	Probably yes	Probably not	Definitely not
Si uno(a) de tus mejores amigos(as) te ofreciera un cigarrillo electrónico, ¿lo usarías?	Definitivamente sí	Probablemente sí	Probablemente no	Definitivamente no

AFFILIATION

¹ UR Medicine, University of Rochester Medical Center, University of Rochester, Rochester, United States

CORRESPONDENCE TO

Francisco Cartujano-Barrera. UR Medicine, University of Rochester Medical Center, University of Rochester, 601 Elmwood Ave, Rochester, NY 14642, United States.

E-mail: Francisco_cartujano@urmc.rochester.edu

ORCID ID: <https://orcid.org/0000-0001-8069-1750>

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The purpose of this article is to present the Spanish version of the susceptibility to e-cigarettes scale.

Data are from a randomized controlled trial to assess the immediate impact of vaping prevention graphic messages among 362 Black and Latino adolescents (aged 12–17 years), with equal representation between the two groups⁶⁻⁷. The study design and results are described thoroughly in a previous publication⁶. A forward-backward methodology was used to translate the susceptibility to e-cigarettes scale into Spanish⁸. Moreover, a Community Advisory Board of Latino adolescents reviewed and approved the translation. Table 1 shows the translation of the scale. Cronbach's alpha was used to assess the internal consistency reliability of the questionnaire⁹.

Sixty-five Latino adolescents completed the susceptibility to e-cigarettes scale in Spanish, as part of the baseline survey. The Cronbach's alpha coefficient of the Spanish version of the susceptibility to e-cigarettes scale was 0.74. The introduced Spanish version of the susceptibility to e-cigarettes scale shows an acceptable internal consistency reliability, with potential applications in both research and clinical settings. The use of validated Spanish-language assessment tools – developed in collaboration with community members – is vital to advance vaping prevention research among Latinos. Future research should examine other aspects of instrument validity (e.g. predictive validity) and involve larger samples.

REFERENCES

1. Gentzke AS, Wang TW, Cornelius M, et al. Tobacco product use and associated factors among middle and high school students — National Youth Tobacco Survey, United States, 2021. *MMWR Surveill Summ*. 2022;71(5):1-29. doi:10.15585/mmwr.ss7105a1
2. U.S. Food & Drug Administration. Research priorities. August, 2022. Accessed August 25, 2022. <https://www.fda.gov/tobacco-products/research/research-priorities>
3. Carey FR, Wilkinson AV, Harrell MB, Cohn EA, Perry CL. Measurement and predictive value of susceptibility to cigarettes, e-cigarettes, cigars, and hookah among Texas adolescents. *Addict Behav Rep*. 2018;8:95-101. doi:10.1016/j.abrep.2018.08.005
4. Nicksic NE, Barnes AJ. Is susceptibility to E-cigarettes among youth associated with tobacco and other substance use behaviors one year later? Results from the PATH study. *Prev Med*. 2019;121:109-114. doi:10.1016/j.ypmed.2019.02.006
5. Seo DC, Kwon E, Lee S, Seo J. Using susceptibility

- measures to prospectively predict ever use of electronic cigarettes among adolescents. *Prev Med*. 2020;130:105896. doi:10.1016/j.ypmed.2019.105896
6. Cartujano-Barrera F, Hernández-Torrez R, Cai X, et al. Evaluating the immediate impact of graphic messages for vaping prevention among Black and Latino adolescents: A randomized controlled trial. *Int J Environ Res Public Health*. 2022;19(16):10026. doi:10.3390/ijerph191610026
7. Cartujano-Barrera F, Hernández-Torres R, Orfin RH, et al. Proactive and reactive recruitment of Black and Latino adolescents in a vaping prevention randomized controlled trial. *Children*. 2022;9(7):937. doi:10.3390/children9070937
8. Brislin RW. Back-translation for cross-cultural research. *J Cross Cult Psychol*. 1970;1(3):185-216. doi:10.1177/135910457000100301
9. Schmitt N. Uses and abuses of coefficient alpha. *Psychol Assess*. 1996;8(4):350-353. doi:10.1037/1040-3590.8.4.350

CONFLICTS OF INTEREST

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ETHICAL APPROVAL AND INFORMED CONSENT

The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board of the University of Rochester Medical Center (Approval number: STUDY00006267; Date: June 18, 2021). Parents'/guardians' permission and adolescents' assent was obtained from all subjects involved in the study.

DATA AVAILABILITY

The datasets generated for this study are available on request to the corresponding author.

PROVENANCE AND PEER REVIEW

Not commissioned; internally peer reviewed.

DISCLAIMER

The views and opinions expressed in this article are those of the authors.