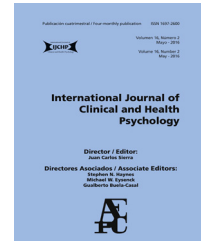




International Journal of Clinical and Health Psychology

www.elsevier.es/ijchp



ORIGINAL ARTICLE

Delay discounting in e-cigarette users, current and former smokers

Sara Weidberg*, Alba González-Roz, Roberto Secades-Villa

Universidad de Oviedo, Spain

Received 19 May 2016; accepted 11 July 2016

KEYWORDS

E-cigarette;
Smoking;
Delay discounting;
Impulsivity;
Experiment

PALABRAS CLAVE

Cigarrillo electrónico;
Fumar;
Descuento por demora;
Impulsividad;
experimento

Abstract *Background/Objective:* Despite the fact that electronic cigarettes, or e-cigarettes, are being increasingly used as an alternative to smoking tobacco cigarettes, few studies have explored psychological factors associated with e-cigarette use. Prior studies aimed at exploring correlates of e-cigarette use have focused on sociodemographic and smoking-related characteristics. However, no previous work has examined psychological features such as impulsivity among e-cigarettes users. The main objective of this study was to compare impulsivity rates across four groups of participants: current e-cigarette users who were former smokers; current smokers; former smokers; and controls. *Method:* A sample of 136 participants completed a computerized delay discounting task for hypothetical monetary values. *Results:* Delay discounting was greater among e-cigarette users than former smokers. E-cigarette users also showed an intermediate discounting that did not differ from smokers and controls. Moreover, delay discounting was significantly greater among current smokers compared to former smokers and controls. *Conclusions:* Taken together, our results extend previous research on delay discounting by providing evidence on impulsivity levels among current e-cigarette users for the first time. © 2016 Asociación Española de Psicología Conductual. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Descuento por demora en usuarios de cigarrillos electrónicos: fumadores y ex-fumadores

Resumen *Antecedentes/Objetivo:* A pesar de que los cigarrillos electrónicos se han usado cada vez más como alternativa al consumo de tabaco, pocos estudios han explorado los factores psicológicos asociados a su uso. Estudios previos que analizan los correlatos del cigarrillo electrónico se han centrado en las características sociodemográficas y de dependencia del

* Corresponding author: Department of Psychology, Universidad de Oviedo, Plaza Feijóo, s/n, 33003 Oviedo, Spain.
E-mail address: weidbergsara.uo@uniovi.es (S. Weidberg).

<http://dx.doi.org/10.1016/j.ijchp.2016.07.004>

1697-2600/© 2016 Asociación Española de Psicología Conductual. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Please cite this article in press as: Weidberg, S., et al. Delay discounting in e-cigarette users, current and former smokers. *International Journal of Clinical and Health Psychology* (2016), <http://dx.doi.org/10.1016/j.ijchp.2016.07.004>

tabaco. Sin embargo, ningún estudio ha analizado características psicológicas como la impulsividad en usuarios de cigarrillo electrónico. El objetivo del estudio fue comparar las tasas de impulsividad en cuatro grupos de participantes: usuarios actuales de cigarrillo electrónico que eran ex-fumadores, fumadores de tabaco, ex-fumadores y controles. *Método:* Una muestra de 136 participantes completó una versión informatizada de la tarea de descuento por demora para reforzadores monetarios hipotéticos. *Resultados:* El descuento por demora fue mayor entre los usuarios de cigarrillo electrónico que entre los ex-fumadores. Los usuarios de cigarrillo electrónico mostraron un descuento intermedio que no difirió del de los fumadores y los controles. Además, el descuento por demora fue significativamente mayor entre los fumadores en comparación con los ex-fumadores y los controles. *Conclusiones:* Los resultados obtenidos amplían la literatura previa sobre descuento por demora arrojando nueva evidencia sobre los niveles de impulsividad en los usuarios de cigarrillo electrónico.

© 2016 Asociación Española de Psicología Conductual. Publicado por Elsevier España, S.L.U. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Electronic cigarettes (e-cigarettes) are battery powered devices commercialized as harm-reducing alternatives to smoking (Farsalinos, Tsiapras, Kyrzopoulos, Savvopoulou, & Voudris, 2014). They are designed to mimic traditional tobacco cigarettes by enabling users to vaporize a liquid solution containing propylene glycol, vegetable glycerin, flavorings, and—optionally—nicotine (Adkison et al., 2013; Wagener et al., 2014). The awareness and use of e-cigarettes has increased exponentially since their launch in 2004 (Dockrell, Morrison, Bauld, & McNeill, 2013; King, Alam, Promoff, Arrazola, & Dube, 2013). E-cigarette prevalence among American and European users has been reported to increase from 1.8% to 13% between 2010 and 2013 and from 2.7% to 6.7% between 2010 and 2012, respectively (Dockrell et al., 2013; McMillen, Gottlieb, Shaefer, Winickoff, & Klein, 2015). In Spain, only one study was conducted to estimate data on e-cigarette use among a representative sample of the city of Barcelona. In this sense, Martínez-Sánchez et al. (2015) showed that 1.6% of participants were current e-cigarette users suggesting that the prevalence of e-cigarette use in Spain might be lower compared to those reported in both America (Vickerman, Carpenter, Altman, Nash, & Zbikowski, 2013) and Europe (Adkison et al., 2013).

Despite the emerging popularity of e-cigarettes, public health authorities have expressed the scarce evidence regarding their safety and effectiveness as a substitute for cigarettes, or an alternative to quitting smoking (World Health Organization, 2014). Research focused on e-cigarettes and smoking cessation has provided mixed results. Whilst several studies suggested e-cigarettes may be effective in promoting tobacco abstinence (Etter & Bullen, 2014; Rahman, Hann, Wilson, Mnatzaganian, & Worrall-Carter, 2015), others have not found such results (Brose, Hitchman, Brown, West, & McNeill, 2015). A growing body of research has explored the characteristics related to e-cigarette use (Dawkins, Turner, Roberts, & Soar, 2013; Etter, Bullen, Flouris, Laugesen, & Eissenberg, 2011). The vast majority of these studies have focused on sociodemographic and smoking-related features associated with its use. Certain characteristics such as male gender (Ramo, Young-Wolff,

& Prochaska, 2015), being a current or former smoker (Martínez-Sánchez et al., 2015), or having a higher level of education (Pearson, Richardson, Niaura, Vallone, & Abrams, 2012) are associated with e-cigarette use.

Less is known regarding psychological features such as impulsivity among e-cigarette users. Impulsivity has shown to be a strong predictor of smoking relapse (Doran, Spring, McChargue, Pergadia, & Richmond, 2004). In this regard, assessing impulsivity levels within e-cigarette users may help to detect individuals with increased difficulty in maintaining smoking abstinence and greater likelihood of dual use of e-cigarettes and tobacco. Although this construct has been traditionally assessed by the use of self-report questionnaires (Martínez-Loredo, Fernandez-Hermida, Fernandez-Artamendi, Carballo, & Garcia-Rodriguez, 2015), a widely used behavioral measure of impulsivity is delay discounting (Odum, 2011). This impulsivity index describes the devaluation of a reinforcer as a function of increasing delay to its receipt (Reynolds, 2006). Cigarette smokers show greater delay discounting when compared to controls (Bickel, Odum, & Madden, 1999). Delay discounting is also associated with smoking onset, maintenance, severity, and relapse (Audrain-McGovern et al., 2009; Sheffer et al., 2014; Sweitzer, Donny, Dierker, Flory, & Manuck, 2008). To our best knowledge, no previous study has assessed delay discounting rates in a sample of e-cigarette users. Whether it differs between e-cigarette users, cigarette smokers and former smokers remains unknown.

This study aims to address this gap in previous research by comparing performance on a delay discounting task across e-cigarette users, smokers, former smokers and controls.

Method

Participants

Participants comprised a subset of individuals recruited throughout the community by means of advertisements in

Download English Version:

<https://daneshyari.com/en/article/7240417>

Download Persian Version:

<https://daneshyari.com/article/7240417>

[Daneshyari.com](https://daneshyari.com)