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FORMAS INOVADORAS E TECNOLÓGICAS DE CESSAÇÃO DO TABAGISMO

Juiz de Fora

2020

NATHÁLIA MUNCK MACHADO

FORMAS INOVADORAS E TECNOLÓGICAS DE CESSAÇÃO DO TABAGISMO

Tese apresentada ao Programa de Pós-Graduação em Psicologia da Universidade Federal de Juiz de Fora para obtenção do título de Doutora em Psicologia por Nathália Munck Machado

Orientador: Prof. Dr. Telmo Mota Ronzani

Coorientador: Prof. Dr. Henrique Gomide

Juiz de Fora

2020

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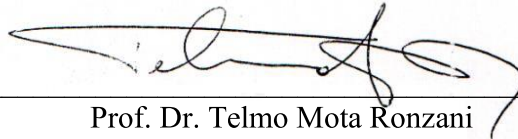
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**Nathália Munck Machado**

FORMAS INOVADORAS E TECNOLÓGICAS DE CESSAÇÃO DO TABAGISMO

Tese apresentada ao Programa de Pós-Graduação em Psicologia da Universidade Federal de Juiz de Fora como requisito parcial à obtenção do grau de Doutor em Psicologia por Nathália Munck Machado

Tese defendida e aprovada em 10 de novembro de dois mil e vinte, pela banca constituída por:



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2020

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*“It’s all seems impossible until it’s done.”*

*Nelson Mandela*

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## RESUMO

O tabagismo é uma das maiores ameaças à saúde pública em todo o mundo, matando mais de 8 milhões de pessoas por ano. Apesar da evidência de efetividade de intervenções face a face para a cessação do tabagismo, elas têm alto custo de implementação e manutenção. Além disso, estudos mostram que apenas uma pequena parcela dos fumantes as utiliza. Novas e promissoras estratégias de cessação vêm surgindo no mercado e é necessário que sejam testadas. Assim, a presente tese é dividida em dois estudos. **Estudo 1.** Objetivo: Descrever a eficácia de uma intervenção computadorizada para a cessação do tabagismo comparada à intervenção breve. Métodos: Estudo piloto longitudinal, com follow-ups após 1 e 3 meses. Fumantes maiores de 18 anos foram recrutados entre agosto de 2018 e março de 2019 (N=49; 24 alocados no grupo intervenção computadorizada e 25 no grupo intervenção breve). Resultados: A idade média dos participantes foi de 44,4 anos e 59,2% da amostra eram homens. As características entre os dois grupos eram similares, com exceção do número de cigarros fumados por dia (média de 16,6 no grupo intervenção e 12,4 no grupo controle). Trinta e cinco participantes responderam ao acompanhamento 1 e 19 responderam ao segundo. Os resultados mostraram taxas semelhantes de cessação e redução para ambos os grupos de intervenção. Conclusões: A intervenção baseada na Internet foi um pouco mais eficaz para a cessação do tabagismo, enquanto a intervenção breve foi mais eficaz na redução do número de cigarros fumados por dia. Apesar disso, essa diferença foi pequena e não teve significância estatística. Esses resultados devem ser interpretados com cautela, principalmente devido ao pequeno tamanho da amostra. **Estudo 2.** Objetivo: Descrever as características dos usuários de cigarros eletrônicos e comparar suas intenções de parar de usar



cigarros eletrônicos entre dois países. Métodos: Estudo transversal online. Usuários de cigarros eletrônicos maiores de 18 anos e que morassem nos EUA ou no Reino Unido foram recrutados através de uma plataforma de *crowdsourcing* (N=1.044; 524 do Reino Unido e 520 dos EUA). Resultados: A maioria dos entrevistados no Reino Unido (61,6%) e nos EUA (61,3%) pretendeu em algum momento parar de usar cigarros eletrônicos. Análises ajustadas descobriram que os planos futuros para parar de fumar eram significativamente diferentes entre os países, com os entrevistados dos EUA planejando parar em geral mais cedo. Conclusões: A maioria dos *vapers* pretende parar, mas os entrevistados dos EUA planejam parar mais cedo do que os do Reino Unido. Isso pode ser devido às políticas do Reino Unido, que recomendam o uso de cigarros eletrônicos como um auxílio para a cessação, às diferenças dos países com relação à regulamentação e comercialização de cigarros eletrônicos e também à epidemia de doença pulmonar relacionada ao uso de cigarros eletrônicos nos EUA.

**Palavras-chave:** Cessação do tabagismo. Intervenção via internet. Cigarros eletrônicos.

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### **ABSTRACT**

Smoking is one of the biggest threats to public health worldwide, killing more than 8 million people each year. Despite evidence of the effectiveness of face-to-face interventions for smoking cessation, they have a high cost of implementation and maintenance. Furthermore, studies show that only a small portion of smokers use them. New and promising cessation strategies are emerging on the market and they need to be tested. Thus, this thesis is divided into two studies. *Study 1*. Objective: To describe the effectiveness of a web-based intervention for smoking cessation compared to the brief intervention. Methods: Pilot longitudinal study, with follow-ups after 1 and 3 months. Smokers over 18 years old were recruited between August 2018 and March 2019 (N = 49; 24 allocated to the web-based intervention group and 25 to the brief intervention group). Thirty-five participants responded to follow-up 1 and 19 responded to the second. The results showed similar rates of cessation and reduction for both intervention groups. Conclusions: The Internet-based intervention was slightly more effective for smoking cessation, while the brief intervention was more effective in reducing the number of cigarettes smoked per day. Despite this, this difference was small and had no statistical significance. These results should be interpreted with caution, mainly due to the small sample size. *Study 2*. Objective: To describe the characteristics of electronic cigarette users and compare their intentions to stop using electronic cigarettes between two countries. Methods: Online cross-sectional study. Electronic cigarette users over the age of 18 and living in the USA or the UK were recruited through a crowdsourcing platform (N = 1,044; 524 in the UK and 520 in the USA). Results: Most respondents in the UK (61.6%) and the USA (61.3%) intended to stop using electronic cigarettes at some point. Adjusted analyzes found that future plans

to quit smoking were significantly different across countries, with US respondents planning to quit generally sooner. Conclusions: Most vapers intend to quit, but US respondents plan to quit sooner than UK respondents. This may be due to UK policies recommending the use of e-cigarettes as a cessation aid, US policies related to e-cigarette regulation and marketing, and the epidemic of e-cigarette-related lung disease in the US.

**Keywords:** Smoking cessation. Web-based intervention. Electronic cigarettes.

## **LISTA DE ABREVIATURAS E SIGLAS**

AMA	American Medical Association
AUDIT-C	Alcohol Use Disorders Identification Test
BI	Brief intervention
CDC	Center for Disease and Control
CE	Cigarro eletrônico
CREPEIA	Centro de Referência em Pesquisa, Intervenção e Avaliação em Álcool e Outras Drogas
FDA	Food and Drug Administration
FTND	Fagerström Test for Nicotine Dependence
GAD-2	Generalized Anxiety Disorder, versão com 2 itens
GATS	Global Adult Tobacco Survey
HES	Household Economic Survey
IBGE	Instituto Brasileiro de Geografia e Estatística
INCA	Instituto Nacional do Câncer
LWT	“Life without Tobacco” intervention
MHRA	Medicines and Healthcare products Regulatory Agency
NICE	National Institute for Health and Care Excellence
OMS	Organização Mundial de Saúde
PATH	Population Assessment of Tobacco and Health Study

PHQ-2	Patient Health Questionnaire, versão com 2 itens
PHQ-9	Patient Health Questionnaire, versão com 9 itens
PNCT	Protocolo Clínico e Diretrizes Terapêuticas do Tabagismo
PS-ECDI	Penn State Electronic Cigarette Dependence Index
SUS	Sistema Único de Saúde
TPD	Tobacco Product Directive
TRN	Terapia de Reposição de Nicotina
WHO FCTC	World Health Organization Framework Convention on Tobacco Control

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## INTRODUÇÃO

### Contextualização da Pesquisa

O presente estudo é fruto da continuação de projetos e pesquisas que vêm sendo desenvolvidos pelo grupo de estudos “Viva sem Tabaco”, que pertence ao Centro de Referência em Pesquisa, Intervenção e Avaliação em Álcool e outras Drogas (CREPEIA) da Universidade Federal de Juiz de Fora. Um dos frutos dos trabalhos do grupo foi o desenvolvimento da intervenção Viva sem Tabaco (<http://www.vivasemtabaco.com.br>) pelo Prof. Dr. Henrique Gomide, que é também coorientador do presente trabalho. O Viva sem Tabaco é uma intervenção de código aberto, online e computadorizada para psicoeducação de tabagistas. Foram publicados artigos que resultaram do desenvolvimento dessa intervenção (Gomide et al., 2016) e também da caracterização de seus usuários e a prevalência de depressão (Gomide et al., 2017). Durante o mestrado, pesquisamos sobre o recrutamento online de fumantes para a intervenção “Viva sem Tabaco” (Machado et al., 2019). Como continuação da linha de pesquisa, a próxima questão que precisava ser respondida era: Intervenções computadorizadas são eficazes para a cessação do tabagismo no Brasil? Dessa forma, foi realizado um estudo piloto para investigar a efetividade da intervenção “Viva sem tabaco” comparada à Intervenção breve motivacional para a cessação tabágica. O resultado deste estudo é o primeiro artigo desta tese.

No decorrer do curso de doutorado, realizei um período de doutorado sanduíche na University of Kansas Medical Center, nos Estados Unidos (EUA), através de uma bolsa da CAPES. Durante este período, o Departamento de Saúde dos EUA e também a Agência Nacional de Vigilância Sanitária do Brasil (Anvisa) estavam discutindo sobre como os cigarros eletrônicos deveriam ser regulamentados em cada país. Neste mesmo ano aconteceu um surto de casos e mortes devido à EVali, doença pulmonar ligada ao uso de cigarros eletrônicos (Moritz et al., 2019). Dessa forma, juntamente com a minha coorientadora de doutorado sanduíche, Profa. Dra. Kimber Richer, surgiu outra questão de pesquisa: Políticas de regulamentação do cigarro eletrônico influenciam na futura intenção de querer parar de usar cigarros eletrônicos? Para responder à essa pergunta, avaliamos e comparamos as características e as intenções de parar de usar cigarro eletrônico entre usuários dos EUA e do Reino Unido, países que têm políticas de regulamentação divergentes, principalmente com relação ao uso de cigarros eletrônicos como ferramenta para parar de fumar. Os resultados deste estudo constam na segunda parte desta tese.

Dessa forma, a tese a seguir discutirá sobre o uso da internet e do cigarro eletrônico como formas inovadoras e tecnológicas que vêm sendo utilizadas como estratégias de cessação do tabagismo.

## **Introdução teórica**

### *Tabagismo*

A Organização Mundial de Saúde (OMS) considera a epidemia do tabaco como uma das maiores ameaças à saúde pública em todo o mundo, matando mais de 8 milhões de pessoas por ano (OMS, 2020). Apesar do declínio da prevalência ao longo dos anos, 1.3 bilhão de pessoas ainda são fumantes em todo mundo. Destes, cerca de 80% vivem em países de baixa e média renda onde o peso das doenças e mortes relacionadas ao tabaco é ainda maior (OMS, 2020). No Brasil, 9.3% da população é fumante - o que equivale a cerca de 20 milhões de brasileiros -, sendo 12.1% homens e 6.9% mulheres (Vigitel, 2017). O impacto do tabagismo é responsável por mais de 156 mil mortes por ano no Brasil, o que equivale a 428 mortes por dia e 12,6 % de todas as mortes que ocorrem no país em pessoas maiores de 35 anos (Pinto et al., 2017).

Os fatores relacionados aos problemas que o uso de tabaco pode acarretar justificam diversos esforços voltados para a busca de intervenções. Formas tradicionais de intervenções de cessação de tabagismo incluem tratamento farmacológico, aconselhamento psicoterápico, suporte comportamental, entrevista motivacional, intervenções de auto-ajuda ou tratamento que utilize a combinação de diversas técnicas (Hartmann-Boyce, Stead, Cahill, & Lancaster, 2013). No Brasil, o tratamento para o tabagismo é realizado com base nas diretrizes do “*Protocolo Clínico e Diretrizes Terapêuticas do Tabagismo*” (PNCT), que estão de acordo com as principais diretrizes internacionais (Ministério da Saúde, 2020). Tais diretrizes consideram o uso de medicamentos, a terapia de reposição de nicotina (TRN) e a abordagem cognitivo comportamental como métodos eficazes para o tratamento do tabagismo. Estudos mostram que, dentre as diversas formas disponíveis, as intervenções mais eficazes envolvem o apoio comportamental face-a-face combinado com medicações, como a terapia de reposição de nicotina, Vareniclina ou Bupropiona (Brose et al., 2011; Caraballo et al., 2017; Department of Health and Human Services, 2010; Fiore, Jaen, & Baker, 2008; Lancaster & Stead, 2017; Naslund et al., 2017).

Dados mostram que 49% dos fumantes brasileiros querem parar de fumar nos próximos seis meses (INCA, 2017). No Brasil, tratamento para a cessação do tabagismo é oferecido de forma gratuita pelo Sistema Único de Saúde (SUS). Porém, apenas 7,4% dos fumantes brasileiros procuram assistência profissional quando tentam parar de fumar e, desses, apenas 2,6% recebem tratamento de um profissional de saúde (Cruvinel et al., 2020). Um estudo avaliou métodos usados por fumantes para parar de fumar e mostrou que o aconselhamento de um médico ou de um

profissional de saúde e a utilização de medicamentos aprovados foram os métodos menos utilizados por fumantes em suas tentativas de parada, sendo reportados por apenas 15% e 12% dos fumantes, respectivamente (Caraballo et al., 2017).

Além disso, os custos econômicos do uso do tabaco são substanciais e incluem custos significativos de saúde para tratar as doenças causadas pelo uso do tabaco (OMS, 2020). No Brasil, o tabagismo gera R\$ 39,4 bilhões de custos médicos diretos por ano, o que equivale a 8% de todo o gasto com saúde, e R\$ 17,5 bilhões em custos indiretos decorrentes da perda de produtividade devida à morte prematura e incapacidade, o equivalente à R\$ 56,9 bilhões de gastos (Pinto et al., 2017). Dessa forma, ainda que já existam diversas formas bem documentadas e eficazes para parar de fumar, é necessário que sejam desenvolvidas e testadas novas formas de tratamento que sejam menos custosas e também efetivas para o tratamento do tabagismo.

#### *Intervenções computadorizadas*

Formas inovadoras de tecnologias de comunicação, como a Internet e o uso de celular, estão sendo cada vez mais utilizadas para fornecer informações e apoio aos fumantes que desejam parar de fumar. Além disso, oferecer tratamento em diversas modalidades é uma das ações apontadas pela OMS para reduzir o impacto do tabagismo (OMS, 2008). As intervenções mediadas pela Internet representam uma boa alternativa quando nenhum outro tipo de tratamento está disponível ou quando os pacientes estão em lista de espera, aguardando o tratamento tradicional. Além disso, elas também podem ser utilizadas como complemento ao tratamento tradicional, no acompanhamento do tratamento, em pacientes que não vão aos centros de tratamentos devido ao estigma da doença, distância, limitações físicas e/ou econômicas e em atividades de promoção e prevenção em saúde (Muñoz, 2010).

O Brasil registrou aproximadamente 137 milhões de usuários de Internet em 2019 e, desses, 47% pesquisaram informações sobre saúde ou serviços de saúde na Internet (Statista, 2020). Dados mostram que usuários de Internet no Brasil também pesquisam sobre cessação do tabagismo, ultrapassando meio milhão de pesquisas online por mês no Brasil (Carlini et al., 2012). Mas as informações sobre saúde na Internet podem não ser confiáveis. Um estudo investigou a cobertura e a qualidade das intervenções baseadas na internet disponíveis em português e descobriu que nenhuma delas abordava adequadamente os elementos fundamentais das diretrizes para a cessação do tabagismo (Carlini et al., 2012). Aplicativos móveis disponíveis em português também foram

avaliados e apresentaram problemas de qualidade e baixos níveis de adesão às diretrizes de tratamento do tabagismo (Formagini et al., 2017). Apesar da eficácia das intervenções baseadas na internet já terem sido bem estabelecidas em outros países, demonstrando taxas de abandono entre 12,8% (Taylor et al., 2017) e 14,3% (Graham et al., 2016), existe uma disparidade entre a alta demanda por suporte online para parar de fumar e a escassez de recursos online de qualidade para fumantes no Brasil (Carlini et al., 2012). Para suprir essa lacuna, a intervenção "Viva sem Tabaco" foi desenvolvida para oferecer aos fumantes brasileiros um método de autoajuda para parar de fumar. O "Viva sem Tabaco" adere às diretrizes para o tratamento do tabagismo no Brasil e também ao código de conduta do *Health on the Net Foundation* (Gomide et al., 2016). Dessa forma, é necessário que a intervenção seja testada quanto à sua efetividade para a cessação do tabagismo.

### *Cigarros eletrônicos*

O cigarro eletrônico (CE) é o mais notável entre os novos produtos do tabaco e tem sido cada vez mais utilizado como uma estratégia de cessação (Hartmann-Boyce et al., 2016). Os cigarros eletrônicos são dispositivos que funcionam através de bateria para inalar uma solução que pode ou não conter nicotina e/ou outras substâncias. Quando contém nicotina, a concentração pode variar consideravelmente. Seu uso também pode ser chamado de *vaping* e seus usuários são chamados de *vapers*. Dados do *National Health Interview Survey 2016* mostram que 15,3% dos adultos nos Estados Unidos já usaram cigarro eletrônico (Bao et al., 2018). No Brasil, a venda, importação e propaganda de cigarros eletrônicos são estritamente proibidas pela Agência Nacional de Vigilância Sanitária (Anvisa). Tais restrições, porém, não foram suficientes para evitar o consumo de cigarros eletrônicos entre os brasileiros. Existem poucos estudos acerca da prevalência do consumo de CE no Brasil, mas um estudo recente (Bertoni et al., 2019) estimou a prevalência de uso em 0,43% da população geral, ou seja, cerca de 650 mil pessoas. Uma análise conduzida com fumantes de capitais brasileiras encontrou que 9,3% dos fumantes relataram já ter experimentado cigarros eletrônicos e 4,6% usaram ou experimentaram nos últimos 6 meses (Cavalcante et al., 2017).

Os cigarros eletrônicos têm crescido em popularidade, em parte porque se acredita que eles sejam uma alternativa mais segura aos cigarros convencionais (Glasser et al., 2017) e por serem apontados como potencial substituto para cigarros e outros produtos de tabaco fumado (Centers of Disease Control [CDC], 2020a). Entretanto, ainda não existe consenso sobre a efetividade de seu

uso para ajudar os fumantes de cigarros combustíveis a reduzir ou parar de fumar. Como são relativamente novos, os cigarros eletrônicos são controversos, especialmente com relação às consequências do uso de longo prazo para a saúde, e o papel desses produtos na iniciação e na perpetuação da dependência da nicotina em adolescentes e jovens adultos (McRobbie et al., 2014; Pisinger & Døssing, 2014; Bullen et al., 2013). De fato, a comunidade de controle ao tabagismo encontra-se dividida com relação a questões de segurança e eficácia dos cigarros eletrônicos para parar de fumar, se os cigarros eletrônicos promovem o consumo de cigarros pelos jovens e como esses dispositivos devem ser regulamentados.

Um estudo que avaliou métodos utilizados para parar de fumar mostrou que 35.3% dos fumantes utilizaram cigarros eletrônicos para substituir parte dos cigarros fumados e que 24.7% os substituíram completamente por cigarros eletrônicos (Caraballo et al., 2017). Embora os cigarros eletrônicos sejam associados a menores danos quando comparados aos cigarros tradicionais numa avaliação à curto prazo (National Academies of Sciences, Engineering, and Medicine, 2018), eles ainda possuem quantidade mensurável de substâncias tóxicas e apresentam potencial de vício. Além disso, ainda não existem evidências de que os cigarros eletrônicos sejam menos danosos do que os cigarros tradicionais à longo prazo (Bals et al., 2019). Dessa forma, entender e ajudar os usuários de cigarros eletrônicos nas tentativas de parar pode ser uma prioridade em breve.

**Estrutura da tese**

No primeiro artigo, submetido ao periódico *Nicotine & Tobacco Research* (Qualis A2, fator de impacto 4.079), o objetivo foi avaliar a efetividade da intervenção Viva sem Tabaco comparada à Intervenção Breve. Para isso, dados foram coletados entre agosto de 2018 e março de 2019. São apresentados dados sobre a eficácia com relação a cessação tabágica, bem como a comparação das características dos usuários.

No segundo artigo, submetido ao periódico *Addiction* (Qualis A1, fator de impacto 6.851), foi realizada uma pesquisa sobre as características de usuários de cigarros eletrônico dos Estados Unidos e do Reino Unido e uma investigação sobre a intenção desses usuários em parar de usar cigarros eletrônicos. Os dados foram coletados em março de 2020 e foram realizadas análises ajustadas e regressão logística para a comparação das variáveis de interesse.

Por fim, na última sessão da tese, são apresentadas discussões e considerações finais sobre os achados dos artigos.





## **Internet-based intervention compared to brief intervention for smoking cessation in Brazil: a pilot study**

### **Introduction**

Smoking is the leading cause of cancer, preventable death, and disability worldwide, causing around 8 million deaths per year (OMS, 2020). Overall mortality among smokers is about three times higher than that among never smokers (U.S. Department of Health and Human Services, 2014). Despite the serious health risks, 1.3 billion people are still smokers worldwide. Of these, about 80% live in low- and middle-income countries where the burden of tobacco-related illness and death is even greater (OMS, 2020). In Brazil, 9.3% of the population smokes - 12.1% men and 6.9% women (Vigitel, 2017).

Several health promotion methods are being used for smoking prevention and cessation, but it is well reported that professional counseling combined with pharmacotherapy is the most effective treatment for smoking cessation (Fiore et al., 2008). However, due to the high cost of face-to-face treatments, less costly and effective forms of treatment can help to address the treatment demand. Also, the governments and healthcare providers should make available more and accessible resources to help tobacco users stop, as suggested by WHO FCTC Article 14 (OMS, 2008).

Brief advice can significantly increase the odds of quitting (Stead, Bergson, & Lancaster, 2008). The brief intervention (BI) based on the motivational interview integrates different strategies to increase motivation to change behaviors (Miller & Rollnick, 2001). The BI has better results than simple counseling, especially among those who are not ready to quit smoking (Butler et al., 1999) and is considered a cost-effective strategy to smoking cessation (Aveyard et al., 2012; NICE, 2006; Stead, Bergson, & Lancaster, 2008). There is good evidence of the effectiveness of a BI provided by a therapist, such as advice from a doctor (Stead, Bergson, & Lancaster, 2008), and it yields a quit rate of 13.4% (Fiore et al., 2006).

The internet can reach large numbers of people and has great potential to provide behavior change interventions to them at low cost (Swartz et al., 2006). The internet-based interventions are attractive due to their low cost, convenience and confidentiality (Marks, Cavanagh, & Gega, 2007; Murray, 2008). They also have potential to reach smokers who might not access presential support due to limited health care availability or stigmatization and it can be an opportunity for

psychological help to those who could not receive it otherwise (Fleming et al., 2016; Richards & Richardson, 2012; Rogers et al., 2017).

Tobacco users have increasingly used online resources to search about smoking cessation, with data showing that more than 12 million smokers have used the internet for help quitting in 2017 (Graham & Amato, 2019). The effectiveness of Internet-based interventions is well established, with reported quit rates ranging from 12.8% (Taylor et al., 2017) to 14.3% (Graham et al., 2016), and the available evidence is already enough to justify its use for smoking cessation (Graham et al., 2017; Myung et al., 2009; Swartz et al., 2006).

Digital technology has been evolving rapidly and constantly, which requires them to be constantly updated and refined after evaluative trials for not becoming obsolete and less attractive when they are available outside research contexts (Poppelaars et al., 2016). People can, however, use digital health interventions differently in real-world contexts compared to the conditions of the studies (Fleming et al., 2018). For these reasons, in addition to evaluating the viability and effectiveness of the interventions in clinical contexts, it is important to examine the use of digital interventions in real-world contexts. In this matter, this study aimed to evaluate the efficacy of a computerized intervention compared to the brief intervention (face to face intervention) for smoking cessation among Brazilians in a real-world context.

## **Methods**

### *Participants*

Participants were recruited from the Federal University of Juiz de Fora and from a city-owned company in Juiz de Fora (Brazil). Potential participants were identified through flyers, company meetings and were also contacted personally and invited to participate in a smoking cessation program. Eligibility criteria were current smoking (defined as people who reported smoking cigarettes in the past 7 days), and age 18 years or older. Exclusion criteria were participating in smoking cessation treatment at the time of the study. Participants completed an eligibility screening and provided written informed consent. The study was approved by the Human Research Ethics Committee of Federal University of Juiz de Fora (CAEE: 84446218.4.0000.5147).

### *Interventions*

After completion of the baseline survey, participants were randomly allocated into two interventions: 1) The “Life without Tobacco (LWT)” web-based intervention ([www.vivasemtabaco.com.br](http://www.vivasemtabaco.com.br)), or 2) Face to face Brief-intervention (BI). These two interventions are described above.

#### *1) Life without Tobacco (LWT)*

It is a web open-source intervention available in 7 languages. It was developed based on scientific research and treatment protocols to offer psychoeducation to smokers (Gomide et al., 2016). Information about smoking management is based on the guidelines of the “*Treating tobacco use and dependence - 2008 update*” (Fiore et al., 2008). The intervention is divided into three stages: (1) “Is it worth stopping?” - intended for smokers who are not yet confident about making an attempt to quit; (2) “Ready to quit?” - intended for smokers confident in making an attempt to quit; and (3) “Have you stopped?” - intended for smokers who have gone through the previous phase or who have relapsed. Educational content includes information about the consequences of tobacco use and benefits of quitting, effective cessation methods and medications, nicotine dependence, and comorbidities related to smoking. The main objective of the intervention is to develop a personalized plan to stop smoking, which focuses on preparing to choose a quit date, coping with slips, and preventing relapse. After selecting the stop date, the user receives follow-up by email for 12 months.

#### *2) Brief-intervention (BI)*

It is a structured, focal and objective intervention strategy, which focuses on behavior change (De Micheli, Formigoni, & Carneiro, 2017). BI involves opportunistic advice, discussion, negotiation and encouragement. A protocol was developed including essential elements of the BI process aimed at users of psychoactive substances (Miller & Sanches, 1993), which were: screening, feedback, setting goals, discussing the pros and cons of use, counseling and development of the patient's self-efficacy. The protocol was printed so that it could be followed during the intervention so that the BIs were as similar as possible. The intervention was performed in a single session of approximately 20 minutes in duration. The final objective was the same as the web-

based intervention: developing a personalized plan to stop, set up a quit date, helping smokers to cope with slips, and prevent relapses.

### *Measures*

At baseline, a questionnaire was performed before the intervention. The questionnaire consisted of the following measures:

- Demographic characteristics of age, sex, level of education, and health insurance.
- Smoking history questionnaire, which included questions about the kind of tobacco product used, number of cigarettes smoked per day, use frequency, age of use initiation, attempts to quit, and methods to quit.
- The Fagerström Test for Nicotine Dependence – FTND (Heatherton et al., 1991) is a standard instrument for assessing nicotine dependence. The test consists of 6 items with scores ranging from 0 to 10, which permit the classification of nicotine dependence into five levels: very low (0 to 2 points); low (3 to 4 points); moderate (5 points); high (6 to 7 points); and very high (8 to 10 points).
- The Contemplation Ladder assesses the readiness to consider smoking cessation based on the individual's motivational stages for change (Biener & Abrams, 1991). It consists of a single question with a response range from 1 to 10; higher scores mean higher motivation.
- The PHQ-9 (Patient Health Questionnaire-9) assesses the degree of depression severity through nine items that are directly based on the nine diagnostic criteria for major depressive disorder in the DSM-IV (Kroenke, Spitzer, & Williams, 2001). The final score ranges from 0 to 27 and can be classified into five levels: minimal depression (1 to 4 points); mild depression (5 to 9 points); moderate depression (10 to 14 points); moderately severe depression (15 to 19 points); and severe depression (20 to 27 points).
- The AUDIT-C is a 3-question screen that can help identify patients who are hazardous drinkers (Bush et al., 1998). It is scored on a scale of 0-12 points. In men, a score of 4 points or more is considered positive for alcohol misuse; in women, a score of 3 points or more is considered positive.

### *Procedures*

Participants were contacted by phone to fill in a follow-up questionnaire 1- and 3-months after intervention. At the 30-day follow-up, participants were contacted through phone to know if

their smoking status had changed after the intervention. Specifically, they were asked whether they stopped smoking or decreased the number of cigarettes smoked per day, and the Ladder scale was accessed again to compare motivation with the baseline. As a secondary outcome, it was also accessed if they sought intensive treatment for smoking cessation, which was recommended after the intervention.

On the nineteenth day after the intervention date, participants were contacted again and the participants' abstinence and smoking status were accessed, as well as their seeking for intensive treatment.

### *Data analysis*

The primary outcome was to assess the efficacy of the intervention through the cessation rate between groups, assessed 1 and 3 months after the intervention. Secondary outcomes involved comparing motivation between baseline and follow-ups and also seeking for an intensive smoking cessation treatment that was recommended after the intervention completion. Because of the possible bias that the treatment-seeking could have in the cessation, we also assessed the association between both.

First, the normality Shapiro-Wilk test was performed, which found that the data distribution was not normal ( $p = .0105$ ). Consequently, non-parametric tests were performed for inferential analysis in order to compare the characteristics of the participants between the two groups. The p-value was generated for either the Wilcoxon Signed-rank test or the Fisher's Exact test two-sided that was performed to compare variables between both groups. To calculate the intention-to-treat, the Pearson's Chi-square test was performed, and all participants were included in the analysis; those who did not respond to the follow-up were treated as smokers (as if they did not quit smoking after the intervention). Chi-square test was also used to determine the association between treatment-seeking and abstinence. All analyses were performed in R Core Team (2020).

## **Results**

### *Participants characteristics*

Forty-nine smokers were allocated to one of the two intervention groups, 25 in the brief intervention group and 24 in the Life without Tobacco group. Participants were between 21-65 years old (mean age of 44.46 years old). Most of them were male (59.2%) and had elementary

school as the highest level of education (44.9%). Regarding tobacco use history, they smoked an average of 14.5 cigarettes per day, and the mean score for nicotine dependence was 4.53, which means low to moderate dependence. Their motivation to quit was 5.75 on average. Only the number of cigarettes smoked per day was statistically different between the two groups ( $p = .002$ ). The results are presented in Table 1.

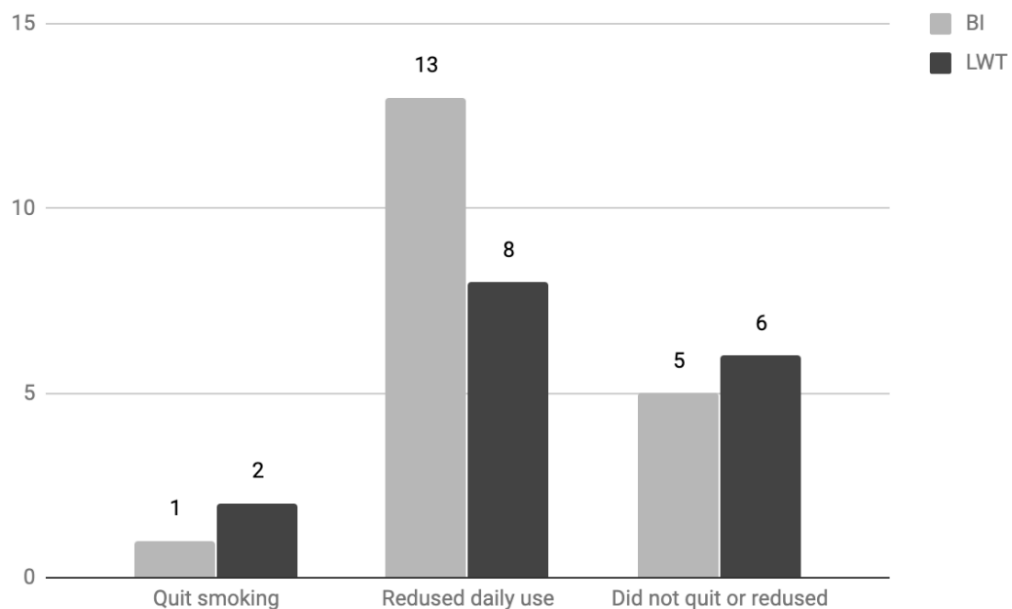
**Table 1.** Differences in Participants Characteristics Between the two interventions groups

Characteristics	BI (N=25, 51.1%)	LWT (N=24, 48.9%)	Total (N=49)	<i>P</i>
Age, mean (SD)	42.9 (14.1)	46.1 (12.5)	44.46 (13.3)	0.774
Sex				1
Male, % (N)	60 (15)	58.3 (14)	59.2 (29)	
Female, % (N)	40 (10)	41.7 (10)	40.8 (20)	
Education				0.2824
Elementary, % (N)	48 (12)	41.7 (10)	44.9 (22)	
High school, % (N)	20 (5)	37.5 (9)	28.6 (14)	
College, % (N)	12 (3)	16.7 (4)	14.3 (7)	
Graduation, % (N)	20 (5)	4.1 (1)	12.2 (6)	
Cigarettes per day, mean (SD)	12.4 (8.2)	16.7 (8.7)	14.5 (8.6)	0.002
Dependence, mean (SD)	4.1 (2.3)	5 (1.8)	4.5 (2.1)	0.017
Motivation to quit, mean (SD)	5.7 (1.7)	5.8 (2.1)	5.6 (1.9)	0.791
Depression (PHQ-9), mean (SD)	15.4 (5.9)	16.3 (5.3)	15.9 (5.64)	0.674
Alcohol (AUDIT-C), mean (SD)	4.2 (3.1)	4.9 (3.4)	4.6 (3.2)	0.357

### Follow up 1

Thirty-five (16 LWT x 19 BI) answered the first follow-up questionnaire (71.4%). Of these, 3 had stopped smoking (2 LWT x 1 BI) and 22 had reduced the amount of cigarettes/day (8 LWT x 13 BI), they reduced the number of cigarettes smoked by 55.5% on average. Eleven participants had not quit smoking (6 LWT x 5 BI). This difference was not statistically significant ( $X^2=1.367$ ,  $p=.504$ ). The results of the first follow up are presented in Figure 1.

Figure 1 - Cessation and reduction rate at 30-day follow-up (N=35)



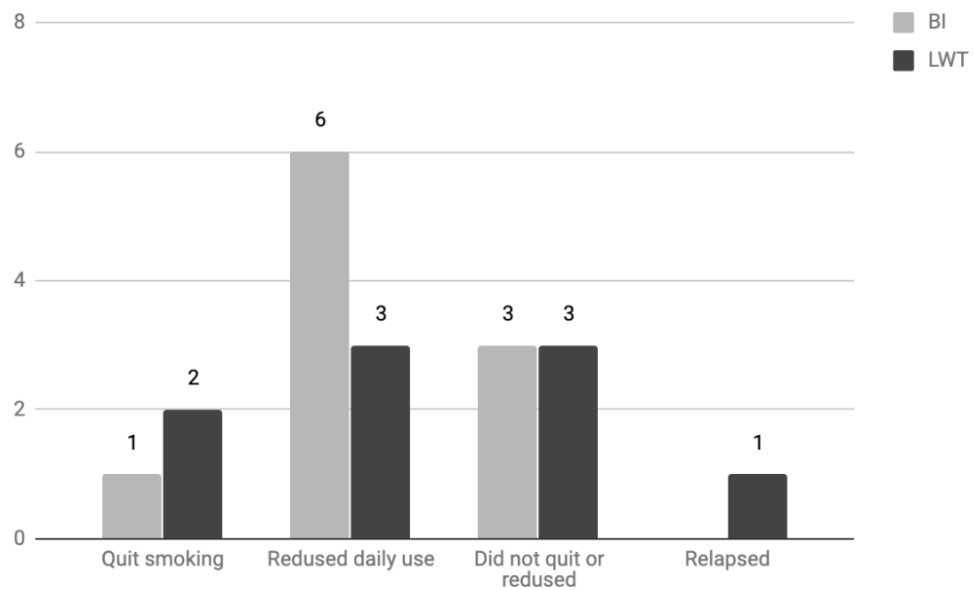
Regarding the motivation to quit smoking, there was a small increase in the baseline average of 5.75 for 6.14 (SD = 2.11) in the 30-day follow up. Separated by group, the average score was 6.18 (SD = 2.28) for the LWT group and 6.10 (SD = 2.02) for BI. This difference was not statistically significant ( $p = 0.426$ ). Six people reported seeking intensive treatment for smoking cessation after the intervention, 5 in the BI group versus one in the LWT group. But this difference was also not statistically significant ( $X^2=2.287$ ,  $p = .1848$ ). Regarding the association between seeking treatment and cessation, of the 3 people who reported quitting smoking, one had sought treatment ( $X^2=0.46156$ ,  $p = .7939$ ).



### Follow up 2

Three months after the intervention, 19 participants (10 LWT x 9 BI) completed the second follow-up (38.7%). Nine people continued to decrease the number of cigarettes smoked daily (22% additional reduction on average) (3 LWT x 6 BI). Six people did not quit (3 LWT x 3 BI) and one relapsed and returned to smoking (LWT). Three people had quit smoking in total (2 LWT x 1 BI). Regarding the seeking for treatment, three participants reported soughing for intensive smoking cessation treatment (1 LWT x 2 BI). Of the 3 people who reported quitting smoking, no one had sought treatment ( $X^2=2.1$ ,  $p = .5519$ ). The results of the second follow up are presented above in Figure 2.

Figure 2 - Cessation and reduction rate at 90 day follow up (N=19)



The results of the intention-to-treat analysis also did not demonstrate statistical significance between the intervention groups in both follow-ups ( $X^2= 1.864$ ,  $p=.393$  for follow up 1;  $X^2= 1.340$ ,  $p=.511$  for follow up 2).

## **Discussion**

This study showed similar rates of cessation and reduction for both brief intervention and Internet-based groups. According to the follow-up results, the internet-based intervention seems slightly more effective for smoking cessation, while the brief intervention was more effective in reducing the number of cigarettes smoked per day. But due to the small sample size, these results should be discussed with caution.

One result that differs from the literature (Balmford, Borland, & Benda, 2008; Prout et al., 2002) is that our sample included more men than women. Although the prevalence of smoking is higher in men (Drope et al., 2018), women are more likely to seek smoking cessation approaches (Zhu et al., 2000). However, this result may be due to the higher prevalence of male workers in the places where the intervention was carried out.

Compared to another study that assessed demographic characteristics of Brazilian smokers, smokers in this study were slightly younger (average 44.4 versus 49 years) and smoked fewer cigarettes per day (average 14.5 cigarettes per day versus 20 cigarettes). But the age was consistent with another study that pointed out that younger smokers are more likely than older smokers to try to quit smoking (Curry et al., 2007).

Most of the smokers in this sample have elementary school as the highest level of education, which is consistent with the smoking literature that points out the relation between lower levels of education and higher rates of cigarette smoking (Center for Behavioral Health Statistics and Quality, 2017; Warren et al., 2014).

Although almost all the variables were shown to be similar between the two groups, the number of cigarettes smoked per day differ between both. With the LWT group having a higher average of cigarettes per day compared to the BI group. The intensity of consumption is strongly associated with the level of nicotine addiction (Shiffman et al., 2012), and this explains why the level of addiction was also higher in the LWT group. As higher levels of nicotine are associated with difficulties in quitting (Tanner, Chenoweth, & Tyndale, 2015), participants in the LWT group may have encountered greater challenges in quitting smoking compared to the BI group. Although the difference in the cessation rate was not significant between the groups, this fact may have an advantage over the internet-based intervention.

This study has found cessation rates of 12% for the internet intervention and 5% through the brief advice after 1 month follow up. This was similar to other studies that showed quit rates

ranging from 12.8% (Taylor et al., 2017) to 14.3% (Graham et al., 2016) for interactive and tailored internet-based interventions. A literature review on internet-based interventions (Park & Drake, 2015) also found high rates of smoking cessation when compared to the control group, with studies reporting cessation rates ranging from 1% to 42.8% depending on the follow-up period. The internet-based intervention has demonstrated effectiveness that is comparable to other recommended forms of cessation treatment (Graham & Amato, 2019).

Regarding the secondary outcome of this study, the motivation score increased slightly in both groups after the intervention received. Studies also reported that both brief intervention (Rohsenow et al., 2014) and internet-based intervention (Mavrot et al., 2017) increased the motivation score to stop smoking. As motivation is a basic prerequisite for a quit attempt (Buczowski et al., 2014) and, on the contrary, lack of motivation is a fundamental barrier to engagement (Simblett et al., 2018), both interventions are important tools to increase motivation and thus elucidate an attempt to stop.

Finally, the brief intervention was more effective than the internet-based intervention to get participants sought for intensive treatment to stop smoking. This is consistent with previous studies that found brief intervention to be effective in achieving treatment referral of problem drinkers (Bien, Miller, & Tonigan, 1993). We found no association between seeking treatment and cessation. Because of the small frequency of participants, more robust analyzes could not be performed. Thus, future studies are necessary to confirm this finding.

This study has some limitations. First, the sample size is relatively small so that conclusions about effectiveness can be made. Although the results are promising on the efficacy of these interventions, future studies should include a larger number of participants for more generalizable conclusions. Another common limitation in longitudinal studies is the decrease in the response rate over the follow-up. Although we made several attempts to contact the participants in these studies to carry out the follow-ups, we lost some, which biases the conclusion of the results.

**Conclusion**

Both interventions were effective for cessation and reduction of cigarette consumption. Although the results need to be interpreted with caution as it is a pilot study, they point out that it is effective to carry out a clinical study to measure the real impact of such interventions. In this matter, a larger trial will be necessary to better understand the effectiveness of these interventions for smoking cessation. Future investigations should also include longer follow-up periods to determine the long-term impact of web-interventions on smoking cessation.



## **Intention to stop using e-cigarette: a comparative survey between the US and the UK**

### **Introduction**

In 2018 an estimated 41 million people globally used e-cigarettes (Euromonitor, 2020). Researchers are scrambling to establish evidence on which to base public policy. Due to the rapid rise in e-cigarette uptake and constant changes in product characteristics, there is no evidence that e-cigarettes are safer than combusted cigarettes in the long term (Bals et al., 2019). There is conclusive evidence, however, that completely substituting e-cigarettes for combustible tobacco cigarettes reduces users' short-term exposure to a number of toxicants and carcinogens (The National Academies of Sciences, Engineering, and Medicine, 2018). Based on this, some policy groups suggest that e-cigarettes must be in the short term safer than cigarettes and recommend vaping for cigarette cessation (National Academies of Sciences, Engineering, and Medicine, 2018). “Safer” does not mean that e-cigarettes are harm-free and most guidelines stress that people who have never smoked cigarettes should not be encouraged to vape (McNeill et al., 2020). Hence, e-cigarettes are viewed by many as harm reduction products. A key tenet in harm reduction is the principle that the voices and preferences of people who use drugs should be included in plotting the course of programs and policies (Harm Reduction Coalition, 2020), but little is known regarding the preferences of people who use e-cigarettes regarding when, if ever, they would like to stop vaping or the social or environmental factors that might affect those preferences.

Governments in the United States (US) and the United Kingdom (UK) have different policy approaches related to e-cigarette regulation and use. The UK approach capitalizes on the potential benefits of e-cigarettes for smoking cessation (Royal College Physicians, 2016). E-cigarette use is associated with higher quit rates in population studies (Zhu et al., 2017; Beard et al., 2016). E-cigarettes were found to be more effective than nicotine-replacement therapy for smoking cessation (RR 1.83, 95% CI 1.30 to 2.58  $p < 0.001$ ; EC 18% versus NRT 9.9%) in a clinical trial by the U.K. National Health Service (Hajek et al., 2019). Moreover, two studies found that e-cigarettes containing nicotine increased the chances of long-term cessation compared to e-cigarettes without nicotine in two studies (RR 2.29, 95% CI 1.05 to 4.96; placebo 4% versus EC 9%) (Hartmann-Boyce et al., 2016). Consequently, the Royal College of Physicians concluded that e-cigarettes are likely to improve public health and began promoting the use of e-cigarettes as cessation aids. In the UK e-cigarettes are regulated under the EU Tobacco Product Directive (TPD) and must be licensed as medicines by the Medicines and Healthcare products Regulatory Agency (MHRA,

2016) if they have smoking cessation claims; all other e-cigarettes are regulated as consumer products. Their use, sale and advertising are legal (with some exceptions), and they are available for purchase from vaping shops, pharmacies and other retail outlets. E-cigarettes are not covered by laws restricting smoking in public places.

US e-cigarette policy is focused more on minimizing the potential harms that e-cigarettes might cause (FDA, 2019). The U.S. Food and Drug Administration (FDA) has not approved e-cigarettes as a quit smoking aid. The U.S. Preventive Services Task Force, an independent volunteer group of health experts, concluded that the available evidence is insufficient to recommend e-cigarettes for smoking cessation (Siu & U.S. Preventive Services Task Force, 2015). The US Centers for Disease Control and Prevention (CDC) recommends that people avoid the use of e-cigarettes or vaping products and use only FDA-approved medications as aids in tobacco cessation (CDC, 2020b). The American Medical Association (AMA, 2019) recommends banning the sale and distribution of all e-cigarette and vaping products. In the US e-cigarettes are regulated under the FDA as tobacco products (FDA, 2020). The use of e-cigarettes is legal in the US, but FDA restricts the sale of flavored e-cigarettes, including fruit and mint flavors (FDA, 2020). Further restrictions on sale, advertising and inclusion of e-cigarette on smoking free laws have been enacted at state and local levels (Paradise, 2014).

In both countries, guidance regarding when and how to stop using e-cigarettes is lacking. In the UK, NICE guidelines state that e-cigarette users should stop smoking tobacco completely because any smoking is harmful (NICE, 2018) but, to date, there is no guideline available regarding if, how and when e-cigarette users should also stop using e-cigarettes. In the US, the Centers for Disease Control and Prevention (CDC) recommends that adults who switch to e-cigarettes should also establish a goal for quitting them, to fully eliminate health risks from any tobacco product use (CDC, 2020c).

Some studies have assessed e-cigarette users' intentions to stop vaping, with proportions ranging from 3–8% (Etter, 2016; Skerry et al., 2018), 25–48% (Etter, 2019; Harrel et al., 2015; Jankowski et al., 2019), to 60–70% (Ma et al., 2018; Wong et al., 2018). Among a representative sample of 1,771 adult e-cigarette users in the US, over 60% wanted to quit vaping at some point, 16% planned to quit in the next month, and more than 25% had already tried to quit in the past year (Rosen & Steinberg, 2019). Conversely, an online survey (N=347) conducted mainly in France,

Switzerland and Belgium found that 66% of long-term vapers, who were also ex-smokers, had no intention of stop vaping, and only 10% had ever tried to stop vaping (Etter, 2019).

In the absence of clear evidence regarding the short- and long-term health effects of e-cigarettes, government policy, health sector practices, and public opinion may all exert strong influences on who vapes, why they vape, and when, if ever, they plan to stop. The present paper takes advantage of an online study platform with tens of thousands of enrollees in the US and the UK to describe and compare the characteristics of e-cigarette users in the two countries and examine the influence of perceived social attitudes toward e-cigarettes on intentions to stop vaping.

## **Methods**

### *Data collection*

We used the online crowdsourcing platform *Prolific Academic Ltd* to survey current e-cigarette users currently living in the US or UK. Data were collected in March of 2020 and were stored in The University of Kansas Medical Center (KUMC) REDCap repository. The study was approved by the KUMC Human Research Protection Program (IRB# STUDY00145254).

### *Participants*

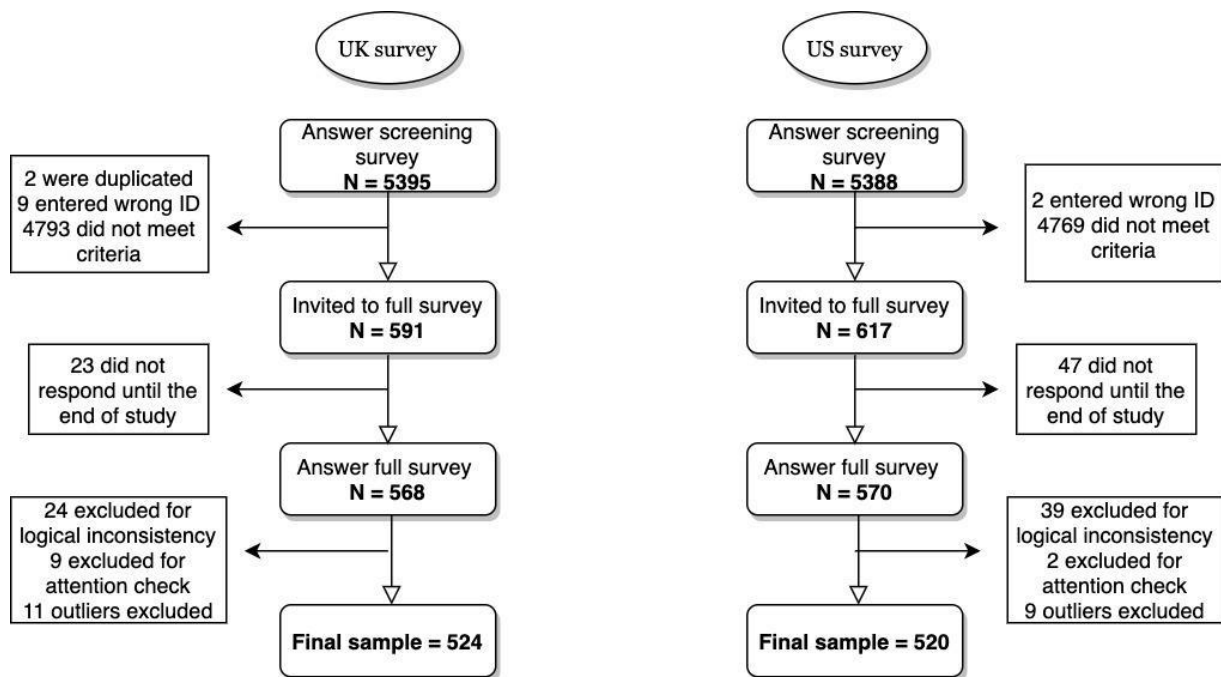
Inclusion criteria included a) being current e-cigarette users; b) between 18 to 90 years old; and c) currently living in the US or UK. *Prolific* pre-screened enrollees and invited those aged 18-90 years old and currently living in the US or the UK to participate in the study. We administered a second screening questionnaire to identify and invite current e-cigarette users to complete the full study survey.

In designing the survey, we included a number of items to eliminate participants who misrepresented their e-cigarette status in order to complete the survey or who were responding at random to finish quickly. The pre-screening survey included several additional demographic questions to conceal the purpose of the final survey and avoid tipping off participants regarding the answer that would trigger an invitation to the full survey. We also excluded survey participants who responded with logical inconsistencies or failed attention check items. We asked respondents if they currently used e-cigarettes both in the screening survey and also in the full survey. Those who answered “no” in the full survey were excluded for logical inconsistency. Two attention check items, at two different locations in the full survey, involved asking participants to fill in a response



with a given number (e.g., slide the ruler to the number “37”). Those who failed to enter the correct number for either attention check were excluded. In addition, we also excluded surveys with outliers. This flow diagram and the final sample size are shown in Figure 1.

Figure 1 – Flow diagram with sample size



We conducted a power analysis to determine the sample size needed to detect a 10% difference in intentions to quit between the two countries. This difference was based on prior studies (Etter, 2019; Rosen & Steinberg, 2019). A sample size of 1,026 (513 from each country) was required to detect a 10% difference with 90% power and an alpha of 0.05.

### *Measures*

The measures were drawn from The Population Assessment of Tobacco and Health Study (PATH) (U.S. Department of Health and Human Services, 2019), The Global Adult Tobacco Survey (GATS) (Global Adult Tobacco Survey Collaborative Group, 2011), and The Household Economic Survey (HES, 2018). Items covered three categories and took 15-20 minutes to complete. The full survey is available in supplemental materials to the article.

Measures of individual characteristics included sociodemographic variables (age, sex, race, education, employment, and health insurance), smoking status (ever or current smoker) and frequency of use, e-cigarette patterns of use (use frequency and times of use per day), other drugs use (cannabis and illegal drug use in the past year), and perception of mental and physical health. The Penn State Electronic Cigarette Dependence Index (PS-ECDI) (Foulds et al., 2015) was used to assess e-cigarette dependence. The Patient Health Questionnaire (PHQ-2) (Kroenke et al., 2013) for depression symptoms. The Generalized Anxiety Disorder 2-item (GAD-2) (Kroenke et al., 2007) for anxiety symptoms. The Alcohol Use Disorders Identification Test (AUDIT-C) (Bush et al., 1998) for hazardous drinking.

Measures of the social and political environment related to e-cigarettes included peer and governmental influence on e-cigarette use, social acceptability of e-cigarettes, and health care providers' attitudes and advice about e-cigarette use. These items either came from or were adapted from PATH study (U.S. Department of Health and Human Services, 2019).

Outcome measures were from the PATH study (U.S. Department of Health and Human Services, 2019). They included the intention to ever stop using e-cigarette ("Do you plan to ever stop using electronic cigarettes or Juul for good?") and plans to quit by given dates ("When do you plan to stop using electronic cigarettes or Juul for good?").

### *Analysis*

Comparison between variables and countries were made using inferential analysis and logistic regression. Most variables required an answer and had no missing data, but some measures included branching logic, hence sample sizes vary for some items. All analyses were performed using the software R Core Team version 4.0.2 (2020).

### *Participant Characteristics and Univariate Analyses*

We summarized participant characteristics and compared characteristics by country. We also compared participant perceptions of social and political attitudes/environment regarding e-cigarette use between both countries. The p-values were calculated using the Wilcoxon Signed-rank test for continuous data and Fisher's Exact test two-sided for the categorical variables. Logistic regression was used in univariate analyses to identify unadjusted predictors of intentions to quit.

### *Adjusted Binary Model of Ever Intending to Quit*

We used three criteria to identify variables to include in adjusted models. We included variables that are known to be associated with smoking cessation and intention to quit, such as age and gender (Fagan et al., 2007; Jahnel et al., 2020). We included participant characteristics that differed at the level of  $p < .05$  by country in the model. Last, variables that in univariate analysis significantly predicted intentions to quit at the level of  $p < .05$  were included. The category with the highest frequency was designated as the reference category. Adjusted odds ratios (OR) and 95 % confidence intervals (95 % CI) were calculated. (see Table 5).

### *Adjusted Ordinal Model of Future Plans to Quit*

Ordinal logistic regression was used in order to compare the future plans for quitting between countries. The dependent variable was future plans for quitting on an ordinal scale (“In the next 7 days”, “In the next 30 days”, “In the next 6 months”, “In the next year”, or “More than one year from now”), with 7 days serving as the reference category. We included the same variables used in the binary logistic to adjust for the proportional odds (see Table 6).

### *Correlation Check*

Correlation test was performed and the variables that were correlated with each other were excluded before the final models were run. The generalized variance inflation factor (GVIF) test was performed to quantify the extent of correlation between one predictor and the other predictors in the model, but the results indicated no collinearity between them (GVIF  $< 2$ ).

## **Results**

A total of 10,783 completed eligibility screening, 1,208 met criteria and were invited to complete the full survey, and 1044 were retained in the final sample (524 from the UK and 520 from the US) (Figure 1). Participants' characteristics by country are presented in Tables 1 to 3. The mean age of the whole sample was 34.1 years old; most were male (50.5%), white (84.8%), had bachelor's degree or above (55.4%), and were employed (75.9%). The majority uses e-cigarette every day (61.1%) and 57% were also current smokers.

*Characteristics by Country* (Table 1). Compared to UK respondents, US respondents were younger (mean age of 33.1 vs 35.2 years old;  $p=.0005$ ) had a higher proportion of males (56.7% vs 44.4%;  $p<.0001$ ) and were currently employed (79% vs 72.8%;  $p=.0024$ ). The majority of UK participants had public health insurance (68.7% vs 24%;  $p<.0001$ ), while most US respondents had private health insurance (50.5% vs 6.4%;  $p<.0001$ ).

Characteristics	US (N=520)	UK (N=524)	<i>P</i>
Age, mean (SD)	33.1 (10.1)	35.2 (10.4)	0.0005*
Sex			<.0001*
Male, % N=528	56.7 %	44.5 %	
Female, % N=506	41.5 %	55.3 %	
Other, % N=10	1.7 %	0.2 %	
Race			<.0001*
White, % N=883	79 %	90.1 %	
Asian or Chinese, % N=64	7.5 %	4.8 %	
African American/Black, % N=39	5 %	2.5 %	
Other, % N=58	8.5 %	2.7 %	
Education			0.563
Bachelor, % N=432	39.4 %	43.3 %	
Master, % N=129	13.1 %	11.6 %	
Doctoral, % N=18	1.5 %	1.9 %	
Other, % N=465	46 %	43.1 %	
Employment			0.002*
Current employed, % N=793	72.9 %	79 %	
Student, % N= 107	13.65 %	6.9 %	
Homemaker, % N=45	3.6 %	4.9 %	
Retired, % N=9	0.6 %	1.1 %	
Unemployed, unable to work, % N=49	4 %	5.3 %	
Unemployed, able to work, % N=41	5.2 %	2.7 %	
Health insurance			<.0001*
Public, % N=485	24.1 %	68.7 %	
Private, % N=297	50.6 %	6.5 %	
Other, % N=49	8.3 %	1.1 %	
No health insurance, % N=213	17.1 %	23.7 %	

*Health, Mental Health and Drug Use* (Table 2). US respondents rated their global health more positively than the UK (82.49% rated their health as good, very good or excellent vs 78%;  $p=.002$ ). US participants reported higher levels of anxiety symptoms than UK respondents (mean score of 2.23 vs 1.80;  $p=.0003$ ). US respondents reported more frequent past year illegal drug use (46.5% vs 32.4%;  $p = .0004$ ) and cannabis use (55% vs 22.1%;  $p<.0001$ ), and more frequent use of cannabis in their e-cigarettes (33.2% vs 8.2%;  $p<.0001$ ). UK respondents had on average a higher score for alcohol use (mean score of 4.01 vs 3.68;  $p = .0628$ ).

**Table 2.** Health, Mental Health and Drug Use Between the US and the UK (N=1044)

Condition	US (N=520)	UK (N=524)	<i>P</i>
<b>Health</b>			
Physical health			0.002*
Excellent, % N=75	10 %	4.4 %	
Very good, % N=316	31.7 %	28.8 %	
Good, % N=447	40.8 %	44.8 %	
Fair, % N=182	15.8 %	19.1 %	
Poor, % N=24	1.7 %	2.7 %	
<b>Mental health</b>			
Excellent, % N=116	13.1 %	9.2 %	0.326
Very good, % N=244	22.7 %	24.0 %	
Good, % N=280	25.4 %	28.2 %	
Fair, % N=252	24.4 %	23.8 %	
Poor, % N=152	14.4 %	14.7 %	
Depression (PHQ-2), mean (SD)	3.8 (1.8)	3.6 (1.5)	0.281
Anxiety (GAD-2), mean (SD)	2.2 (1.9)	1.8 (1.7)	0.0003*
<b>Drug use</b>			
Alcohol (Audit C), mean (SD)	3.7 (2.8)	4 (2.8)	0.063*
Cannabis use (past year), % N=402	55 %	22.1 %	<.0001*
Cannabis use in an e-cig (past year), % N=216	33.3 %	8.2 %	<.0001*
Illegal drug use (past year)			0.0004*
Never, % N=632	53.5 %	67.5 %	

Once or twice, % N=182	19.2 %	15.6 %
Monthly, % N=94	10.6 %	7.4 %
Weekly, % N= 64	6.7 %	5.5 %
Daily or almost daily, % N=72	10 %	3.8 %

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*Cigarette and E-cigarette Use* (Table 3). In terms of cigarette use, compared to the US, UK respondents included more ever (89.3% vs 71.3%;  $p < .0001$ ) and current cigarette smokers (59.3% vs 54.6%;  $p = .1293$ ). Rates of e-cigarette dependence did not differ significantly between countries (11.6% in the UK vs 11.4% in the US;  $p = .3219$ ) nor did motivation to quit e-cigarettes (5.35 in the US vs 5.33 in the UK;  $p = .9918$ ). Compared to the US, however, the UK had a higher frequency of daily e-cigarette use (68.8% vs 53.2%;  $p < .0001$ ), higher use per day (21.9% reported using e-cigarette 20 or more times per day vs 17.1%;  $p = .1148$ ), and also a higher proportion using e-cigarettes to quit smoking (74.8% vs 65.1%;  $p = .0007$ ).

**Table 3.** Cigarette and E-cigarette Use Patters and Intention to Quit E-cigarette Between the US and the UK (N=1044)

Patterns	US (N=520)	UK (N=524)	<i>P</i>
<b>Cigarette use</b>			
Ever smoker, % N=839	71.3 %	89.3 %	<.0001*
Current smoker, % N=581	54.6 %	59.3 %	0.129
Frequency of smoking			
Every day, % N=268	48.4 %	44.2 %	0.318
<b>E-cigarette use</b>			
Frequency			<.0001*
Every day, % N=638	53.3 %	68.9 %	
Some days, % N=406	46.7 %	31.1 %	
Times of use per day			0.115
1-9 times/day, % N=519	52.1 %	47.3 %	
10-19, % N=321	30.8 %	30.7 %	
20+, % N=204	17.1 %	21.9 %	
Dependence, mean (SD)	11.5 (3.2)	11.66 (3.1)	0.322
Use e-cigarette to quit smoking, % N=731	65.2 %	74.8 %	0.0007*
<b>Intention to quit e-cigarette</b>			
Yes, % N=642	61.3 %	61.6 %	0.949
Intention to quit – when			0.004*
In the next 7 days, % N=11	2.8 %	0.6 %	
In the next 30 days, % N=48	11.3 *	3.7 %	
In the next 6 months, % N=141	26.9 %	17 %	
In the next year, % N=239	32.6 %	41.8 %	
More than one year, % N=203	26.3 %	36.8 %	
Motivation to quit, mean (SD)	5.4 (2.8)	5.3 (2.8)	0.992

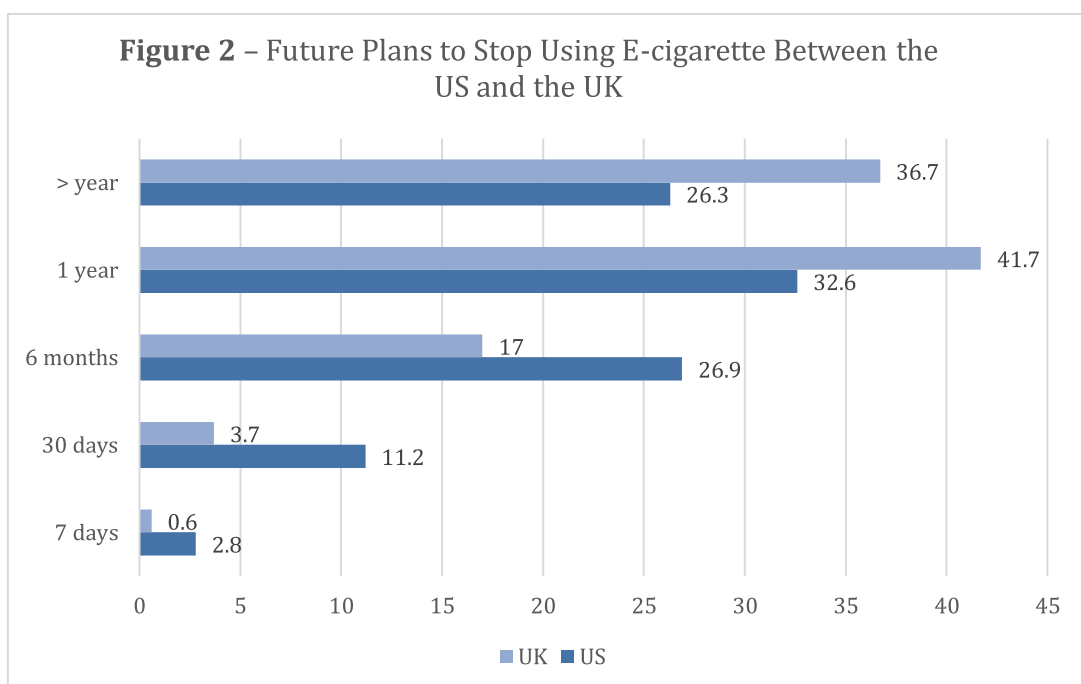
*Social and political environment related to e-cigarettes* (Table 4). In general, UK respondents perceived others had more positive attitudes about e-cigarettes compared to US respondents (Table 4). More UK respondents (23.66%) responded that health care providers have a positive view of e-cigarette use versus 12.68% of US respondents;  $p=.0004$ . Similarly, 56.43% of UK respondents believe the government approves of e-cigarette use versus 29.22% of the US sample;  $p=.0004$ ).

**Table 4.** Perceptions of Healthcare Providers, Government, and Others Views on E-Cigarette Use (N=1044)

Condition	US (N=520)	UK (N=524)	<i>P</i>
Thinking about the people who are important to you, how would you describe their views on using electronic cigarettes, Juul, or other electronic nicotine products?			0.0009*
Very positive, %	6.34 %	6.48 %	
Positive, %	22.30 %	31.48 %	
Neither positive or negative, %	36.15 %	37.78 %	
Negative, %	27.30 %	19.65 %	
Very negative, %	7.88 %	4.58 %	
Thinking about your healthcare providers, how would you describe their views on using electronic cigarettes, Juul, or other electronic nicotine products?			0.0004*
Very positive, %	3.26 %	2.86 %	
Positive, %	9.42 %	20.80 %	
Neither positive or negative, %	33.46 %	49.80 %	
Negative, %	35.57 %	21.56 %	
Very negative, %	18.26 %	4.96 %	
In general, do you think most people in the country where you live disapprove of using electronic cigarettes, Juul, or other electronic nicotine products?			0.0004*
Definitely yes, %	7.88 %	1.90 %	
Probably yes, %	44.23 %	35.87 %	
Probably not, %	43.84 %	53.05 %	
Definitely not, %	4.03 %	9.16 %	
In general, do you think your government approves of using electronic cigarettes, Juul, or other electronic nicotine products?			0.0004*
Definitely yes, %	5.38 %	7.82 %	
Probably yes, %	23.84 %	48.61 %	
Probably not, %	47.69 %	39.31 %	
Definitely not, %	23.07 %	4.19 %	



*Plans to Quit.* Most (61.6%) of UK respondents intended to stop using e-cigarette at some time in the future for good, versus 61.3% of US respondents ( $p=.9493$ ) (Table 3). Regarding future plans for quitting, a higher proportion of UK respondents plan to quit farther into the future (Figure 2). Over three quarters (78%) of UK respondents plan to quit a year or more in the future versus 59% of US respondents. These differences were significant between both countries in unadjusted analysis ( $p=.004$ ).



*Adjusted Binary Model of Ever Intending to Quit.* The difference between the US and UK in terms of intention to stop cigarettes at some time in the future remained nonsignificant ( $p=.475$ ) in adjusted analysis (Table 5). This model adjusted for age, sex, race, education, employment, frequency of e-cigarette use, anxiety, health insurance, perception of health, alcohol and cannabis use. In addition, increasing age (OR 1.01;  $p=.010$ ), being unemployed (OR 2.45;  $p=.000$ ) and non-daily use of e-cigarettes (OR 1.29;  $p=.060$ ) were positively correlated with intention to stop using e-cigarette. Conversely, being female (OR 0.76;  $p=.047$ ), poor health (OR 0.64;  $p=.021$ ), having private health insurance (OR 0.72;  $p=.073$ ), and binge drinking (OR 0.78;  $p=.068$ ) were all negatively associated with ever intending to quit.

**Table 5.** Predictors of Intention to Ever Stop Using E-cigarette (N=1044)

Variable		Odds ratio	<i>P</i>
Survey	UK	Reference	
	US	1.13 (0.81-1.56)	0.476
Age		1.02 (1.00-1.03)	0.011
Sex	Male	Reference	
	Female	0.76 (0.58-0.99)	0.048
	Other	0.53 (0.12-2.23)	0.385
Race	White or Caucasian	Reference	
	African American or Black	1.32 (0.67-2.60)	0.414
	Asian or Chinese	0.79 (0.44-1.42)	0.442
	Other	1.90 (1.08-3.32)	0.025
Education	Bachelor or above	Reference	
	Less than bachelor	0.85 (0.65-1.13)	0.267
Employment	Employed	Reference	
	Unemployed	2.45 (1.52-3.95)	0.001
	Student	0.79 (0.47-1.31)	0.362
	Other	1.41 (0.78-2.53)	0.257
Health insurance	Public	Reference	
	Private	0.72 (0.50-1.03)	0.074
	No health insurance	0.80 (0.57-1.13)	0.201
Physical health	Excellent	Reference	
	Good	0.82 (0.61-1.09)	0.174
	Poor	0.64 (0.44-0.94)	0.022
Anxiety	Minimum risk	Reference	
	Severe risk	0.87 (0.65-1.17)	0.363
Audit	Negative	Reference	
	Positive	0.79 (0.61-1.02)	0.069
Cannabis use in an e-cigarette	Yes	Reference	
	No	1.12 (0.79-1.58)	0.516
E-cigarette use frequency	Every day	Reference	
	Some days	1.29 (0.99-1.70)	0.060

*Adjusted Ordinal Model of Future Plans to Quit.* Univariate differences between country respondents in future plans to quit remained significant in ordinal logistic regression (OR 0.47;  $p > .001$ ). These results are presented in Table 6.

**Table 6.** Ordinal Logistic Regression Results from Future Plans for Quitting E-cigarette Between the US and the UK (N=642)

Variable	Standard error	<i>P</i>	Odds-ratio
Survey			
UK			
US	0.1466	>.0001	0.47 (0.36-0.63)
Future plans for quitting			
In the next 7 days – In the next 30 days	0.3181	>.0001	
In the next 30 days - In the next 6 months	0.1625	>.0001	
In the next 6 months - In the next year	0.1155	>.0001	
In the next year – More than one year	0.1067	>.0001	

## Discussion

More than half of respondents in both countries intended to quit vaping at some point in the future. US respondents, however, intended to quit sooner than UK respondents. Compared to US respondents, UK respondents perceived that government, healthcare providers, and others held more positive attitudes towards e-cigarette use. UK respondents also used e-cigarettes more frequently and a higher proportion reported using e-cigarettes to quit smoking combustible e-cigarettes. Compared to UK respondents, US respondents tended to be younger, male, and more inclined to use illegal drugs, cannabis, and cannabis in their e-cigarette devices.

Our main findings are consistent with two other studies that evaluated intention to stop vaping and found that 62.38% (Rosen and Steinberg, 2019) of vapers want to stop in the USA and 65.3% in Malaysia (Wong et al., 2016). Most of the sample were ever or current smoker, same as found in other studies, showing higher prevalence of e-cigarette use among smokers (Brown et al., 2014) and among ex-smokers (Knock et al., 2018). Others have also found that e-cigarettes have become the most popular cessation devices in several high-income countries, including the USA and the UK (West et al., 2017; Caraballo et al., 2014; Adkison et al., 2013).

Although the respondents came from an online platform, the characteristics of the sample are similar to studies that found higher use of e-cigarettes among those at younger ages, males, Whites, and smokers (Levy, Yuan, & Li, 2017).

Given the support in the UK for using e-cigarettes as cessation devices, the low rate of perceived approval of e-cigarettes by health care providers is surprising. This however is consistent with research that found UK providers offering more cautious advice regarding e-cigarettes than encouraged by country guidelines (Stepney et al., 2018).

Although the intention to ever stop vaping was similar across countries, US respondents intended to quit sooner than UK respondents. This may be due to factors including, UK policies favoring the use of e-cigarettes as a cessation aid, country norms related to vaping, US policies related to e-cigarette regulation, and the outbreak of lung disease in the US. This is consistent with studies that have assessed the relationship between e-cigarette use with tobacco control policies and found less use associated with stronger tobacco control policies (Huang, Tauras, & Chaloupka, 2014; Levy, Yuan, & Li, 2017; Stoklosa, Drope, & Chaloupka, 2016).

Strengths of the study include the use of *Prolific*, a crowdsourcing platform that has good representation in both countries (Prolific, 2020) and also the large sample size, which provided the possibility of comparing two countries with widely different policies on e-cigarettes. Another strength is the use of measures from national studies and the attempts to ensure quality of data through logic and attention checks, which prevented randomly click responses.

Limitations of the study include the possibility of ecological fallacy, which is an incorrect assumption about an individual based on aggregate data for a group. However, as we believe, this limitation does not influence significantly the results of the study, which primary goal was to identify differences in intentions to stop vaping between-groups. Second limitation is about the cross-sectional design that does not allow inferring causality. In this way, information needs to be carefully linked with inferences.

## **Conclusions**

Although e-cigarettes have been considered less harmful compared to smoking cigarettes, the literature shows that e-cigarettes are not totally safe and, therefore, users should be encouraged to quit all forms of tobacco and nicotine use. Given the lack of data on the long-term effects of e-

cigarettes, it is essential to understand vapers intentions regarding quitting vaping, especially when they already quitted smoking, and develop methods for helping them quit when they are ready.

Findings from this survey showed that most vapers want to quit vaping in both countries. However, US vapers want to quit sooner than UK vapers. Most UK vapers reported planning to stop only in the next year or after one year of the study date. Also, UK had a higher frequency of vapers who use electronic cigarettes to stop smoking. These findings may be due to the influence of electronic cigarette regulatory policies in the country, given that the United Kingdom's health guidelines explicitly recommend them as a cessation strategy. These findings have implications for future e-cigarette policy decisions, especially viewed in the context of the rise of electronic cigarettes and the potential for harm reduction if smokers switch to e-cigarettes. Future research could shed light on influences, including the broader question of whether e-cigarette cessation is a desirable public health goal. Besides, as most vapers want to stop using e-cigarettes, future studies must evaluate ways to stop vaping.

**PARTE III – CONSIDERAÇÕES FINAIS**

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### **Considerações finais**

A partir dos artigos que constituem essa tese foram identificados avanços sobre o conhecimento da efetividade de novas estratégias para a cessação do tabagismo, bem como pontos de discussão acerca das políticas de regulamentação dos cigarros eletrônicos.

Do primeiro artigo, que avaliou a eficácia da intervenção “Viva sem Tabaco”, podemos concluir que a internet se configura como uma boa alternativa para o tratamento do tabagismo entre brasileiros por ter apresentado taxa de cessação similar a outros estudos da literatura. Entretanto, esse estudo possui algumas implicações. Primeiro, a coleta de dados foi realizada em uma população específica, dentro do contexto do trabalho. Isso pode gerar vieses por acabar não espelhando as mesmas características da população online. Entretanto, estudos mostram que intervenções podem ter resultados diferentes e até piores quando são implementadas em ambientes comunitários ou clínicos diferentes daqueles dos ensaios clínicos de pesquisas (Staples et al., 2016; Marchand et al., 2011). Por essas razões, estudos sugerem a importância de também examinar o uso de intervenções digitais em configurações do mundo real (Fleming et al., 2011). Dessa forma, podemos concluir que a intervenção online também foi eficaz dentro de um contexto real de utilização.

Segundo, apesar de termos encaminhado os participantes para a procura de tratamento intensivo após a intervenção, a grande maioria não o fez. A baixa busca e consequente baixo recebimento de tratamento face a face por profissionais de saúde entre fumantes brasileiros já foi relatada em outro estudo (Cruvinel et al., 2020). Dessa forma, seria interessante oferecermos outras tecnologias alternativas e complementares que permitam o acompanhamento dos fumantes, como, por exemplo, aplicativos para dispositivos móveis e um chat respondido por profissionais de saúde.

Através da análise do segundo artigo podemos concluir que a maioria dos usuários de cigarros eletrônico tem intenção de parar de usá-los. Porém, apesar da intenção de parar ter sido similar entre os dois países, a maioria dos usuários do Reino Unido relataram planejamento de parar apenas no próximo ano ou depois de ano da data do estudo. Além disso, o Reino Unido também apresentou maior frequência de usuários que utilizam o cigarro eletrônico como forma de parar de fumar. Esses achados podem ser devido à influência das políticas de regulamentação do cigarro eletrônico no país, tendo em vista que as diretrizes de saúde do Reino Unido explicitamente os recomendam como estratégia para cessação (McNeill et al., 2015). Isso nos trás alguns pontos para discussão com relação às políticas regulamentadoras.

Apesar do cigarro eletrônico ser proibido no Brasil, dados mostram que essa proibição não tem impedido seu uso. Apesar do cigarro eletrônico ter sido apontado como uma forma menos prejudicial comparado ao cigarro, seu uso ainda apresenta riscos e os efeitos de seu uso a longo prazo são desconhecidos. Além disso, a maioria dos fumantes acaba não fazendo a transição total para o uso de cigarros eletrônicos e passa a fazer o uso dual - i.e., usar os dois produtos (Hoffman, Salgado, Dresler, Faller, & Bartlett, 2016), o que acaba trazendo ainda mais riscos e prejuízos do que o uso do que utilizar apenas o cigarro fumado (Bhatnagar et al., 2019; Bhatta et al., 2019; Osei et al., 2019). Quando a transição total acontece, o cigarro eletrônico geralmente é utilizado por mais tempo do que o recomendado para as estratégias de cessação, como terapias de reposição de nicotina, bupropiona e vareniclina (Dawkins et al., 2013). *Vapers* também relataram que não vieram por que deveriam parar de usar cigarros eletrônicos, em particular porque seu uso os ajudou a parar de fumar e por o considerarem menos prejudicial do que o cigarro fumado (Etter, 2019). Porém, o uso de qualquer produto do tabaco não é considerado seguro, incluindo cigarros eletrônicos (CDC, 2020a). Dessa forma, é preciso ter cautela com relação às políticas adotadas sobre a utilização do cigarro eletrônico como ferramenta de cessação do tabagismo. A discussão sobre esse tipo de regulamentação deve levar em conta a influência que os cigarros eletrônicos podem ter na prevalência do tabagismo, tendo em vista que essa alteração pode facilitar o acesso de fumantes e não fumantes a esse produto. Por isso, a OMS (2017) recomenda que os governos se unam para monitorar e combater a desinformação sobre os cigarros eletrônicos, para que a história do tabagismo não se repita. Embora os efeitos de longo prazo ainda sejam desconhecidos, seu potencial viciante devido à nicotina deve ser suficiente para desencadear regulamentações mais rígidas sobre esses produtos (The Lancet Oncology, 2018).

O segundo ponto a ser discutido sobre os achados deste estudo é com relação às estratégias de cessação para usuários de cigarro eletrônico. A maioria dos usuários de CE, nos dois países, demonstraram intenção em querer parar de usar cigarro eletrônico. Como ainda não existem diretrizes específicas para a cessação do uso de cigarros eletrônicos, é recomendado a utilização das mesmas diretrizes utilizadas para o tabagismo (CDC, 2020a). É necessário, então, que formas e estratégias de cessação sejam pensadas e testadas para este público. Um estudo investigou se usuários de cigarro eletrônico estariam interessados em suporte para a cessação do uso de cigarros eletrônicos e, entre aqueles que tinham intenção de parar, 46% relataram interesse em usar site de cessação ou aplicativo de smartphone (Etter, 2019). Dessa forma, as intervenções mediadas pela



internet podem ser potenciais alternativas para alcançar usuários de cigarros eletrônicos e engajá-los em tentativas de cessação. Estudos futuros são necessários para avaliar sua eficácia para este público.

Ao considerarmos os resultados desta tese e o histórico da linha de pesquisa, o próximo passo para a construção seria condução de um estudo clínico randomizado para avaliar a efetividade da intervenção “Viva sem Tabaco” e também o desenvolvimento de estratégias de acompanhamento visando expandir sua utilização pelos os fumantes brasileiros. Também seria interessante e de extrema relevância investigar sobre a eficácia dessa estratégia para usuários de cigarros eletrônicos.

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## APÊNDICE A – Parecer Comitê de Ética (Artigo 1)



### PARECER CONSUBSTANCIADO DO CEP

#### DADOS DO PROJETO DE PESQUISA

**Título da Pesquisa:** Viva sem Tabaco - Avaliação da efetividade de uma intervenção computadorizada comparada à intervenção breve motivacional para cessação do tabagismo

**Pesquisador:** TELMO MOTA RONZANI

**Área Temática:**

**Versão:** 2

**CAAE:** 84446218.4.0000.5147

**Instituição Proponente:** Instituto de Ciências Humanas

**Patrocinador Principal:** FUNDAÇÃO DE AMPARO A PESQUISA DO ESTADO DE MINAS GERAIS  
Universidade Federal de Juiz de Fora UFJF  
Financiamento Próprio  
MINISTERIO DA CIENCIA, TECNOLOGIA E INOVACAO

#### DADOS DO PARECER

**Número do Parecer:** 2.677.007

#### Apresentação do Projeto:

Apresentação do projeto está clara, detalhada de forma objetiva, descreve as bases científicas que justificam o estudo, estando de acordo com as atribuições definidas na Resolução CNS 466/12 de 2012, item III.

#### Objetivo da Pesquisa:

Os Objetivos da pesquisa estão claros bem delineados, apresenta clareza e compatibilidade com a proposta, tendo adequação da metodologia aos objetivos pretendido, de acordo com as atribuições definidas na Norma Operacional CNS 001 de 2013, item 3.4.1 - 4.

#### Avaliação dos Riscos e Benefícios:

Riscos e benefícios descritos em conformidade com a natureza e propósitos da pesquisa. O risco que o projeto apresenta é caracterizado como risco mínimo e benefícios esperados estão adequadamente descritos. A avaliação dos Riscos e Benefícios está de acordo com as atribuições definidas na Resolução CNS 466/12 de 2012, itens III; III.2 e V.

#### Comentários e Considerações sobre a Pesquisa:

O projeto está bem estruturado, delineado e fundamentado, sustenta os objetivos do estudo em

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**Telefone:** (32)2102-3788 **Fax:** (32)1102-3788 **E-mail:** cep.propesq@ufjf.edu.br



Continuação do Parecer: 2.677.007

sua metodologia de forma clara e objetiva, e se apresenta em consonância com os princípios éticos norteadores da ética na pesquisa científica envolvendo seres humanos elencados na resolução 466/12 do CNS e com a Norma Operacional Nº 001/2013 CNS.

**Considerações sobre os Termos de apresentação obrigatória:**

O protocolo de pesquisa está em configuração adequada, apresenta FOLHA DE ROSTO devidamente preenchida, com o título em português, identifica o patrocinador pela pesquisa, estando de acordo com as atribuições definidas na Norma Operacional CNS 001 de 2013 item 3.3 letra a; e 3.4.1 item 16. Apresenta o TERMO DE CONSENTIMENTO LIVRE ESCLARECIDO em linguagem clara para compreensão dos participantes, apresenta justificativa e objetivo, campo para identificação do participante, descreve de forma suficiente os procedimentos, informa que uma das vias do TCLE será entregue aos participantes, assegura a liberdade do participante recusar ou retirar o consentimento sem penalidades, garante sigilo e anonimato, explicita riscos e desconfortos esperados, indenização diante de eventuais danos decorrentes da pesquisa, contato do pesquisador e do CEP e informa que os dados da pesquisa ficarão arquivados com o pesquisador pelo período de cinco anos, de acordo com as atribuições definidas na Resolução CNS 466 de 2012, itens: IV letra b; IV.3 letras a,b,d,e,f,g e h; IV. 5 letra d e XI.2 letra f. Apresenta o INSTRUMENTO DE COLETA DE DADOS de forma pertinente aos objetivos delineados e preserva os participantes da pesquisa. O Pesquisador apresenta titulação e experiência compatível com o projeto de pesquisa, estando de acordo com as atribuições definidas no Manual Operacional para CPEs. Apresenta DECLARAÇÃO de infraestrutura e de concordância com a realização da pesquisa de acordo com as atribuições definidas na Norma Operacional CNS 001 de 2013 item 3.3 letra h.

**Conclusões ou Pendências e Lista de Inadequações:**

Diante do exposto, o projeto está aprovado, pois está de acordo com os princípios éticos norteadores da ética em pesquisa estabelecido na Res. 466/12 CNS e com a Norma Operacional Nº 001/2013 CNS. Data prevista para o término da pesquisa: novembro de 2020.

**Considerações Finais a critério do CEP:**

Diante do exposto, o Comitê de Ética em Pesquisa CEP/UFJF, de acordo com as atribuições definidas na Res. CNS 466/12 e com a Norma Operacional Nº001/2013 CNS, manifesta-se pela APROVAÇÃO do protocolo de pesquisa proposto. Vale lembrar ao pesquisador responsável pelo projeto, o compromisso de envio ao CEP de relatórios parciais e/ou total de sua pesquisa

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Continuação do Parecer: 2.677.007

informando o andamento da mesma, comunicando também eventos adversos e eventuais modificações no protocolo.

**Este parecer foi elaborado baseado nos documentos abaixo relacionados:**

Tipo Documento	Arquivo	Postagem	Autor	Situação
Informações Básicas do Projeto	PB_INFORMAÇÕES_BÁSICAS_DO_PROJETO_1081314.pdf	20/04/2018 18:16:39		Aceito
Outros	declaracao_sindicato.pdf	20/04/2018 18:16:09	TELMO MOTA RONZANI	Aceito
Brochura Pesquisa	projeto_atualizado.pdf	17/04/2018 17:18:59	TELMO MOTA RONZANI	Aceito
Outros	Instrumentos_anexo.pdf	01/03/2018 13:54:15	TELMO MOTA RONZANI	Aceito
Folha de Rosto	Folha_rosto.pdf	01/03/2018 13:37:30	TELMO MOTA RONZANI	Aceito
Declaração de Instituição e Infraestrutura	Declaracao_infraestrutura.pdf	01/03/2018 13:37:24	TELMO MOTA RONZANI	Aceito
Projeto Detalhado / Brochura Investigador	projeto.pdf	22/02/2018 15:20:57	TELMO MOTA RONZANI	Aceito
TCLE / Termos de Assentimento / Justificativa de Ausência	TCLE1.pdf	22/02/2018 15:20:18	TELMO MOTA RONZANI	Aceito

**Situação do Parecer:**

Aprovado

**Necessita Apreciação da CONEP:**

Não

JUIZ DE FORA, 25 de Maio de 2018

Assinado por:  
Lainer Augusta da Cunha Serrano  
(Coordenador)

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**APÊNDICE B – Questionário (Artigo 1)**

08/10/2020

Questionário Pesquisa Tabagismo

**Questionário Pesquisa Tabagismo****Nome do/a aplicador/a:**

- Luciamara  
 Maria Luiza  
 Mayra  
 Nathália  
 Pedro

**Nome do respondente:**

---

**Cargo:**

---

**Setor:**

---

**Local/instituto onde trabalha:**

---

**Tipo de busca:**

- Ativa  
 Espontânea

**Id randomização:**

---

**Tipo de intervenção:**

- Intervenção Breve  
 Viva sem Tabaco

**Plano de saúde:**

---

08/10/2020

Questionário Pesquisa Tabagismo

**Sexo:** Feminino Masculino**Qual sua idade?**

---

**Telefone:**

---

**Telefone:**

---

**Telefone:**

---

**Telefone:**

---

**Qual o seu grau de escolaridade?** Ensino fundamental Ensino médio Ensino superior Pós-graduação**Você fumou 1 ou mais cigarros nos últimos 7 dias?** Sim Não**Você está participando atualmente de algum tratamento para parar de fumar?** Sim Não**Qual produto do tabaco você faz uso (exemplo: cigarro industrializado, cigarro de palha, fumo de rolo, rapé, etc.)?**

---

08/10/2020

Questionário Pesquisa Tabagismo

**Qual foi o número de médio de cigarros que você fuma por dia?**

---

**Nos últimos 30 dias quantos dias você fumou?**

---

**Você está usando atualmente alguma medicação para parar de fumar (Adesivo de nicotina, Champix, Bup)?**

- Sim  
 Não

**Qual?**

---

**Quantos anos você tinha quando começou a fumar algum produto do tabaco?**

---

**Durante os últimos 12 meses, você tentou parar de fumar?**

- Sim  
 Não

**Quantas vezes?**

---

**Quais métodos e auxílios para deixar de fumar você já usou?**

- Aconselhamento por profissional de saúde incluindo clínicas de cessação de fumar  
 Reposição de nicotina com: adesivo, pastilha, spray, inalador ou goma de mascar  
 Outros medicamentos com receita médica  
 Homeopatia, acupuntura  
 Chás, ervas ou plantas medicinais  
 Serviços de ajuda por telefone para parar de fumar  
 Serviços de ajuda por internet para parar de fumar  
 Trocou por outro produto do tabaco que não faz fumaça (ex.: rapé, cigarro eletrônico, etc.)

08/10/2020

Questionário Pesquisa Tabagismo

**Quanto tempo depois de acordar você fuma o primeiro cigarro?**

- Mais de 60 minutos (0)
- Entre 31 e 60 minutos (1)
- Entre 6 e 30 minutos (2)
- Menos de 6 minutos (3)

**Você tem dificuldade de ficar sem fumar em locais proibidos?**

- Não (0)
- Sim (1)

**O primeiro cigarro da manhã é o que traz mais satisfação?**

- Não (0)
- Sim (1)

**Você fuma mais nas primeiras horas da manhã do que no resto do dia?**

- Não (0)
- Sim (1)

**Você fuma mesmo quando acamado por doença?**

- Não (0)
- Sim (1)

**Quantos cigarros você fuma por dia?**

- Menos de 11 (0)
- De 11 a 20 (1)
- De 21 a 30 (2)
- Mais de 30 (3)

0-2 - muito baixo

3-4 baixo

5 - médio

6-7 - elevado

8-10 - muito elevado

**Total FTND:**

---

08/10/2020

Questionário Pesquisa Tabagismo

**Qual opção melhor representa você?**

- Eu gosto de fumar e não penso em parar.
- Eu nunca penso sobre parar de fumar e não tenho planos de parar.
- Eu raramente penso sobre parar de fumar e não tenho planos de parar.
- Eu, às vezes, penso sobre parar de fumar, mas não tenho planos de parar.
- Eu frequentemente penso sobre parar de fumar, mas não tenho planos de parar.
- Eu planejo parar de fumar nos próximos 6 meses.
- Eu planejo parar de fumar nos próximos 30 dias.
- Eu ainda fumo, mas comecei a mudar, diminuindo o número de cigarros que eu fumo.
- Eu parei de fumar, mas ainda me preocupo sobre recair. Assim, eu necessito continuar trabalhando para viver livre do cigarro.
- Eu parei de fumar e não fumarei novamente.

Durante as últimas 2 semanas, com que frequência você foi incomodado/a por qualquer um dos problemas abaixo?

**Pouco interesse ou pouco prazer em fazer as coisas**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

**Se sentir "para baixo", deprimido/a ou sem perspectiva**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

**Dificuldade para pegar no sono ou permanecer dormindo, ou dormir mais do que de costume**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

08/10/2020

Questionário Pesquisa Tabagismo

**Se sentir cansado/a ou com pouca energia**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

**Falta de apetite ou comendo demais**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

**Se sentir mal consigo mesmo/a — ou achar que você é um fracasso ou que decepcionou sua família ou você mesmo/a**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

**Dificuldade para se concentrar nas coisas, como ler o jornal ou ver televisão**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

**Lentidão para se movimentar ou falar, a ponto das outras pessoas perceberem? Ou o oposto – estar tão agitado/a ou irrequieto/a que você fica andando de um lado para o outro muito mais do que de costume**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

**Pensar em se ferir de alguma maneira ou que seria melhor estar morto/a**

- Nenhuma vez
- Vários dias
- Mais da metade dos dias
- Todos os dias

08/10/2020

Questionário Pesquisa Tabagismo

**Com que frequência você consome bebidas alcoólicas?**

- Nunca
- Mensalmente ou menos
- 2 a 4 vezes por mês
- 2 a 3 vezes por semana
- 4 ou mais vezes por semana

**Quantas doses alcoólicas você consome tipicamente ao beber?**

- 1 ou 2
- 3 ou 4
- 5 ou 6
- 7 ou 9
- 10 ou mais

**Com que frequência você consome seis ou mais doses de uma vez?**

- Nunca
- Menos do que uma vez ao mês
- Mensalmente ou menos
- Semanalmente
- Todos os dias ou quase todos os dias



## APÊNDICE C – Parecer Comitê de Ética (Artigo 2)

# The University of Kansas Medical Center

Human Research Protection Program

### APPROVAL OF SUBMISSION

February 14, 2020

Kimber Richter  
9135882718  
Fax: 9135882780  
KRICHTER@kumc.edu

Dear Kimber Richter:

On 2/14/2020, the IRB approved the following submission:

Type of Review:	Flexible IRB Review
Reviewed by:	KUMC Human Research Protection Program
IRB#:	STUDY00145254
Title:	Survey of Intention to Stop Using E-cigarettes in the US and the UK
Investigator:	Kimber Richter
Funding:	None
Documents submitted for the above review:	• 2nd Revised Protocol, Survey of Electronic Cigarette.docx, • EE Admin Cert.pdf, • Flexibility Request for Benign Behavioral Study, • Machado CITI training certificate, • Protocol, Survey of Electronic Cigarette (1).docx, • Revised Protocol, Survey of Electronic Cigarette (1).docx, • Survey Introductory Information and Surveys, • UK survey.pdf, • US survey.pdf
Special Determinations:	• Waiver of consent documentation

This project was reviewed and approved under the KUMC Policy for Flexible IRB Review. It is eligible for Flexible IRB Review because it is minimal risk and is not associated with any federal funding or support. As such, you are under this KUMC policy, rather than federal regulations, when you conduct the research.

**This review and approval is granted because you attested that it meets the criteria for Flexible IRB Review. If there is a change to any of the conditions listed below, you must promptly notify the IRB office so that the project can be re-reviewed under the federal regulations governing human subjects research.**

Mail-Stop 1032, 3901 Rainbow Blvd., Kansas City, KS 66160  
Phone: (913) 588-1240 Fax: (913) 588-5771 IRBhelp@kumc.edu

**Research eligible for Flexible IRB Review meets all the following characteristics:**

- Not funded by a direct federal grant
- Not funded through a sub-award or pilot grant associated with federal dollars
- Does not include personnel on a federally-funded training grant
- Is not research conducted under a no-cost extension
- No data will be used to support a pending application for FDA approval or a grant application (e.g., data collection in response to a scored grant submission with plans to re-submit)
- Does not involve an FDA-regulated product or dietary supplement
- Does not involve registries about FDA-regulated products
- Is not conducted under a contract that requires the investigator to adhere to federal human subjects regulations (e.g., 45 CFR 46, 34 CFR 97 or other references to the HHS Common Rule)
- Does not involve any services that could be billed to a federal program

Your approved documents for this study are stored in the “Documents” tab in the eCompliance system.

If you have any questions regarding the human subject protection process, please do not hesitate to contact our office at 913-588-1240 or [IRBhelp@kumc.edu](mailto:IRBhelp@kumc.edu).

Sincerely,

Emily Swanger

## APÊNDICE D – Questionário (Artigo 2)

### Social Demographics

What is your age today?

\* must provide value

What is your sex?

\* must provide value

- Male
- Female
- Other

[reset](#)

What is your race/ethnicity?

Choose all that apply.

\* must provide value

- White or Caucasian
- Black or African American
- Latino or Latina from Latin America
- Asian or Chinese
- Other

What US state do you currently live in?

\* must provide value

At what age did you finish your continuous full-time education at school or college?

\* must provide value

- Not yet finished
- Never went to school
- 14 or under
- 15
- 16
- 17
- 18
- 19 or over

[reset](#)

What degrees or qualifications do you have?

Choose all that apply.

\* must provide value

An undergraduate or first degree

Masters

Doctorate

Other

Which of the following best describes your main work status over the past 12 months?

Choose all that apply.

\* must provide value

Currently employed or self-employed

Student

Homemaker

Retired

Unemployed, unable to work

Unemployed, able to work

In the past 30 days, because of a shortage of money, were you unable to pay any important bills on time, such as rent, electricity or telephone bills?

\* must provide value

Yes

No

[reset](#)

Are you currently covered by any of the following types of health insurance or health coverage plans?

Choose all that apply.

\* must provide value

United Kingdom National Health Service (NHS or HSC)

Private health insurance

United States Medicare, for people 65 and older, or people with certain disabilities

United States Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability

United States VA Health Care, TRICARE, or other military health care

Any other type of health insurance or health coverage plan

No health insurance or health coverage plan

Thinking about the people who **live with you**, do any of them use any of the following products?

Cigarettes

Electronic cigarettes, Juul, or other electronic nicotine products

Choose all that apply.  
\* must provide value

- Traditional cigars
- Cigarillos
- Filtered cigars
- Pipe tobacco
- Shisha or hookah tobacco
- Snus pouches
- Other types of smokeless tobacco (such as dip, spit or chew)
- None of the above

## Smoking History

The following questions ask about your experience with **smoking cigarettes**.

As you answer these questions, please think **ONLY** about your use of cigarettes.

How many times have you smoked a cigarette in your entire life?

\* must provide value

- Never
- 1 time, even just a few puffs
- 2 to 10 times
- 11 to 20 times
- 21 to 50 times
- 51 to 99 times
- 100 or more times

[reset](#)

In the past 30 days, have you smoked a cigarette, even one or two puffs?

\* must provide value

- Yes
- No

[reset](#)

How old were you when you first started smoking cigarettes fairly regularly?  
\* must provide value

On how many of the past 30 days did you smoke cigarettes?  
\* must provide value

On average, on those days you smoked, how many cigarettes did you usually smoke each day?  
\* must provide value

How soon after you wake up do you usually have your first cigarette?  
\* must provide value

- Within 5 minutes
- 6 to 30 minutes
- 31 to 60 minutes
- More than 60 minutes

[reset](#)

In the past 30 days, have you used one of the following tobacco products?

Choose all that apply.  
\* must provide value

- Pipes full of tobacco
- Cigars or cheroots or cigarillos
- Water pipe or hookah
- Smokeless tobacco (such as snus, chew, and others)
- Electronic cigarettes or vapers, or Juul
- I did not use any of tobacco products
- Other

Please, select the number 5.  
\* must provide value

In the past 12 months, did any medical doctor, dentist or other health professional advise you to do any of the following to assist you to stop smoking cigarettes?

Choose all that apply.  
\* must provide value

- I didn't smoke cigarettes in the past year
- Counseling, quitline or other support to quit
- Nicotine replacement therapy (such as Nicotine gum, Nicotine lozenges, Nicotine patch, Nicotine inhaler, or Nicotine nasal spray)

Medications (such as Bupropion, Varenicline, Chantix, Champix, Zyban)

Electronic cigarettes or Juul

None

Other

Submit

## Electronic Cigarette History

The next questions are about **electronic cigarettes**, often called e-cigarettes. There are many types of e-cigarettes. Some common brands include Juul, NJOY and Blu.

As you answer these questions, please think **ONLY** about your use of electronic cigarette.

In the past 30 days, have you used an electronic cigarette or Juul, even one or two times?

\* must provide value

Yes

No

[reset](#)

Do you now use electronic cigarette or Juul...

\* must provide value

Every day

Some days

Not at all

[reset](#)

On how many of the past 30 days did you use electronic cigarette or Juul?

\* must provide value

How old were you when you first started using electronic cigarettes or Juul fairly regularly?

\* must provide value

What concentration of nicotine do you usually use?

\* must provide value

- I don't know the concentration
- 0mg or 0%
- 1-12mg or 0.1-1.2%
- 13-17mg or 1.3-1.7%
- 18-24mg or 1.8-2.4%
- 25+mg or 2.5+%
- Does not contain nicotine

[reset](#)

The next questions ask about your experience with **electronic cigarettes**.

How many times per day do you usually use your electronic cigarette or Juul? (assume that one "time" consists of around 15 puffs or lasts around 10 minutes).

\* must provide value

- 0-4 times/day
- 5-9
- 10-14
- 15-19
- 20-29
- 30+

[reset](#)

On days that you can use your electronic cigarette freely, how soon after you wake up do you first use your electronic cigarette or Juul?

\* must provide value

- 0-5 mins
- 6-15
- 16-30
- 31-60
- 61-120
- 121+

[reset](#)



Do you sometimes awaken at night to use your electronic cigarette or Juul?

\* must provide value

Yes

No

[reset](#)

If yes, how many nights per week do you typically awaken to use your electronic cigarette or Juul?

\* must provide value

0-1 nights

2-3 nights

4+ nights

[reset](#)

Do you use an electronic cigarette or Juul now because it is really hard to stop?

\* must provide value

Yes

No

[reset](#)

Do you ever have strong cravings to use an electronic cigarette or Juul?

\* must provide value

Yes

No

[reset](#)

Over the past week, how strong have the urges to use an electronic cigarette or Juul been?

\* must provide value

None/Slight

Moderate/Strong

Extremely Strong

[reset](#)

Is it hard to keep from using an electronic cigarette or Juul in places where you are not supposed to?

\* must provide value

Yes

No

[reset](#)

Did you feel more irritable because you couldn't use an electronic cigarette or Juul?

Yes

\* must provide value

No

[reset](#)

Did you feel nervous, restless, or anxious because you couldn't use an electronic cigarette or Juul?

\* must provide value

Yes

No

[reset](#)

The next questions are about the **reasons people use electronic cigarettes**. Please select which reasons apply to you.

I use electronic cigarettes or Juul because they are affordable.

\* must provide value

Yes

No

[reset](#)

I can use electronic cigarettes or Juul at times when or in places where smoking cigarettes isn't allowed.

\* must provide value

Yes

No

[reset](#)

I use electronic cigarettes or Juul because they might be less harmful to me than smoking cigarettes.

\* must provide value

Yes

No

[reset](#)

I use electronic cigarettes or Juul because they might be less harmful to people around me than cigarettes.

\* must provide value

Yes

No

[reset](#)

Electronic cigarettes or Juul comes in flavors I like.

\* must provide value

Yes

No

[reset](#)

Using electronic cigarettes or Juul helps people quit smoking cigarettes.  
\* must provide value

Yes

No

[reset](#)

Electronic cigarettes or Juul don't smell.  
\* must provide value

Yes

No

[reset](#)

Using an electronic cigarette or Juul feels like smoking a regular cigarette.  
\* must provide value

Yes

No

[reset](#)

Electronic cigarettes or Juul are more acceptable to non-tobacco users.  
\* must provide value

Yes

No

[reset](#)

Do you use electronic cigarettes or Juul as a way of cutting down on your cigarette smoking?  
\* must provide value

Yes

No

[reset](#)

Do you use electronic cigarettes or Juul as an alternative to quitting tobacco altogether?  
\* must provide value

Yes

No

[reset](#)

Now the next questions are about **stopping using electronic cigarettes**.

As you answer these questions, please think ONLY about electronic cigarettes, do not include cigarettes.

Do you plan to ever **stop using electronic cigarettes** or Juul for good?  
\* must provide value

Yes

 No
[reset](#)

When do you plan to **stop using electronic cigarettes** or Juul for good?

\* must provide value

 In the next 7 days

 In the next 30 days

 In the next 6 months

 In the next year

 More than one year from now

 Never
[reset](#)

Overall, on a scale from 1 to 10 where 1 is not at all interested and 10 is extremely interested, how interested are you in **stop using electronic cigarettes** or Juul?

Please choose a number from 1 to 10.

\* must provide value

 1 Not at all interested

 2

 3

 4

 5

 6

 7

 8

 9

 10 Extremely Interested
[reset](#)

In the past 12 months, have you tried to **stop using electronic cigarettes** or Juul completely?

\* must provide value

 Yes

 No
[reset](#)

In total, how many times in the past 12 months have you tried to **stop using electronic cigarettes** or Juul completely?

\* must provide value

In the past 12 months, have you **stopped using electronic cigarettes** or Juul for one day or longer because you were trying to quit?

\* must provide value

Yes

No

[reset](#)

Thinking back to the last time you **tried to stop using electronic cigarettes** or Juul in the past 12 months, did you use any of the following medication to help you quit?

Choose all that apply.

\* must provide value

I did not use any medication to help me quit

Bupropion (Wellbutrin or Zyban)

Varenicline (Chantix or Champix)

Nicotine replacement therapy (such as Nicotine gum, Nicotine lozenges, Nicotine patch, Nicotine inhaler, or Nicotine nasal spray)

Other

In the past 12 months, did any medical doctor, dentist or other health professional advise you to do any of the following?

Choose all that apply.

\* must provide value

Quit smoking cigarettes

Stop using electronic cigarettes or Juul

Use electronic cigarettes or Juul to quit smoking

I received no advice from any health care provider about cigarettes or electronic cigarettes

In the past 12 months, did any medical doctor, dentist or other health professional advise you to do any of the following to assist you to stop using e-cigarettes?

Choose all that apply.

\* must provide value

I didn't smoke cigarettes in the past year

Counseling, quitline or other support to quit

Nicotine replacement therapy (such as Nicotine gum, Nicotine lozenges, Nicotine patch, Nicotine inhaler, or Nicotine nasal spray)

Medications (such as Bupropion, Varenicline, Chantix, Champix, Zyban)

None

Other

The next questions ask about your opinions on **electronic cigarette**.

How harmful do you think electronic cigarettes, Juul, or other electronic nicotine products are to health?

\* must provide value

- Not at all harmful
- Slightly harmful
- Somewhat harmful
- Very harmful
- Extremely harmful

[reset](#)

Is using electronic cigarettes, Juul, or other electronic nicotine products less harmful, about the same, or more harmful than smoking cigarettes?

\* must provide value

- Less harmful
- About the same
- More harmful

[reset](#)

To what extent, if at all, has using electronic cigarettes, Juul, or other electronic nicotine products damaged your health?

\* must provide value

- Not at all
- A little
- Somewhat
- A lot

[reset](#)

Please, select the number **8**.

\* must provide value

Submit

The next questions are about other people's attitudes toward electronic cigarettes and Juul.

- 1) Thinking about the people **who are important to you**, how would you describe their views on using electronic cigarettes, Juul, or other electronic nicotine products?

\* must provide value

- Very positive
- Positive

Neither positive nor negative

Negative

Very negative

[reset](#)

2) In the past 12 months, to what extent, if at all, has the disapproval of **close friends and family** led you to think about quitting?

\* must provide value

Not at all

Somewhat

Very much

[reset](#)

3) Thinking about your **health care providers**, how would you describe their views on using electronic cigarettes, Juul, or other electronic nicotine products?

\* must provide value

Very positive

Positive

Neither positive nor negative

Negative

Very negative

[reset](#)

4) In general, do you think **most people in the country where you live** disapprove of using electronic cigarettes, Juul, or other electronic nicotine products?

\* must provide value

Definitely yes

Probably yes

Probably not

Definitely not

[reset](#)

5) In general, do you think **your government** approve of using electronic cigarettes, Juul, or other electronic nicotine products?

\* must provide value

Definitely yes

Probably yes

Probably not

Definitely not

[reset](#)

- 6) If the **government** banned the sale of flavored electronic cigarettes, Juul, or e-liquids, would it make you more interested in quitting vaping?  
*\* must provide value*
- 
- Definitely yes  
Probably yes  
Probably not  
Definitely not
- [reset](#)

- 7) If the **government** banned the inclusion of nicotine in electronic cigarettes, Juul, or e-liquids, would it make you more interested in quitting vaping?  
*\* must provide value*
- 
- Definitely yes  
Probably yes  
Probably not  
Definitely not
- [reset](#)

- 8) If the **government** doubled the price of electronic cigarettes, Juul, or e-liquids, would it make you more interested in quitting vaping?  
*\* must provide value*
- 
- Definitely yes  
Probably yes  
Probably not  
Definitely not
- [reset](#)

- 9) If the **government** prohibited the use of electronic cigarettes or Juul in places where smoking is also prohibited, would it make you more interested in quitting vaping?  
*\* must provide value*
- 
- Definitely yes  
Probably yes  
Probably not  
Definitely not
- [reset](#)

## Health

The next questions ask about some **basic medical information** that is important for the study.



1) In general, how would you rate your physical health?  
\* must provide value

- Excellent
- Very good
- Good
- Fair
- Poor

[reset](#)

2) In general, how would you rate your mental health, which includes stress, depression, and problems with emotions?  
\* must provide value

- Excellent
- Very good
- Good
- Fair
- Poor

[reset](#)

3) Have you been told by a doctor, psychiatrist or other professional that you have one of these conditions?

Choose all that apply.  
\* must provide value

- Phobia
- Panic attacks
- Post-traumatic stress
- Generalised anxiety disorder
- Depression
- Post-natal depression
- Obsessive compulsive disorder
- Bipolar disorder
- Eating disorder
- Nervous breakdown
- Personality disorder
- Psychosis or schizophrenia
- Attention deficit hyperactivity disorder (ADHD)
- Attention deficit disorder (ADD)
- Dementia
- Seasonal affective disorder

Any other mental, emotional or neurological problem or condition

None

Over the last 2 weeks, how often have you been bothered by the following problems?

4) Little interest or pleasure in doing things.  
\* must provide value

Not at all

Several days

More than half the days

Nearly every day

[reset](#)

5) Feeling down, depressed or hopeless.  
\* must provide value

Not at all

Several days

More than half the days

Nearly every day

[reset](#)

6) Feeling nervous, anxious or on edge.  
\* must provide value

Not at all

Several days

More than half the days

Nearly every day

[reset](#)

7) Not being able to stop or control worrying.  
\* must provide value

Not at all

Several days

More than half the days

Nearly every day

[reset](#)

Submit

## Other Drugs

The next questions ask about your use of **alcohol and other drugs**. Remember all the information you give to this study will be kept private.

How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?

\* must provide value

- Never
- Once or twice
- Monthly
- Weekly
- Daily or almost daily

[reset](#)

How often did you have a drink containing alcohol in the past year?

\* must provide value

- Never
- Monthly or less
- Two to four times a month
- Two to three times per week
- Four or more times a week

[reset](#)

How many drinks containing alcohol did you have on a typical day when you were drinking in the past year?

\* must provide value

- 1 or 2 drinks
- 3 or 4
- 5 or 6
- 7 to 9
- 10 or more

[reset](#)

How often have you had 4 or more drinks if female, or 5 or more if male, on a single occasion in the past year?  
*\* must provide value*

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

[reset](#)

In the past 12 months, have you used marijuana, cannabis, hash, THC, grass, pot, or weed?  
*\* must provide value*

- Yes
- No

[reset](#)

In the past 12 months, have you used marijuana, cannabis, marijuana concentrates, marijuana waxes, THC, or hash oils in an electronic cigarette or Juul?  
*\* must provide value*

- Yes
- No

[reset](#)

Submit