TSET Health Promotion Research Center

UHealth Stephenson Cancer Center

The UNIVERSITY of OKLAHOMA HEALTH SCIENCES

Background

- Cannabis is the most widely used psychoactive substance globally. The proportion of young adults (19-30 y) who reported past-year cannabis use reached 43% in 2021.
- Electronic cigarettes (e-cig) have gained popularity as a perceived safer alternative to traditional tobacco smoking and an harm reduction aid.
- Despite the decrease in combustible tobacco use, prevalence of cannabis and tobacco products co-use has increased steeply.
- Co-users had higher blood and urine levels of several smoke-related toxic chemicals such as naphthalene, acrylamide, and acrylonitrile metabolites than exclusive users.
- It is essential to understand the effects of cannabis use and co-use with tobacco and e-cigs on oral inflammation.

Aim

To characterize the oral inflammatory patterns among cannabis smokers, tobacco smokers, and e-cig users.

Research Design & Methodology

- Upon ethical committee approval, non-users (NU), exclusive cannabis smokers (CAN), exclusive e-cig users (EC), and combustible tobacco users (TOB) were recruited for this study.
- Participants' cannabis and tobacco products use habits were collected by completing a secured survey.
- Eligible participants were invited to our in-house study facility to complete a 30 minutes visit. Participants were asked to complete a brief questionnaire and saliva sample was collected during the study session.
- Saliva samples were tested for 37 inflammation markers using a multiplex immunoassay (Bio-plex Pro Human inflammation panel-1, Bio Rad, USA).
- Plates were read using Bio-Plex array reader and the data analyzed using Bio-Plex manager software.
- Data analysis was performed using ANOVA and independent t-tests.

Insights into Oral Inflammation: A Study on Cannabis and Tobacco Products Use

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Results					
Table 1. Demographic Characteristics					800 700] <i>p</i> <0.005
N (#)	NS 8	CAN 11	TOB 15	EC 10	$(\int_{-1}^{700} \frac{1}{600} + \frac{1}{500} + \frac$
Age (Mean±SD)	28±5	35±10	32±4	25±5	★ 300 ↓ 200 ↓ 100
Male : Female Product Use Years Median (Mean±SD)	4:4 NA	3:8 6 (7±6)	7:8 14 (14±7)	5:5 2 (2.5±2)	$0 \qquad \qquad$
Figure 1. Impact of cannabis and tobacco products use on oral inflammation					d) 2000 () 1500 () 1500 () 1000 () 1000 () 1000 () 500
250000 () 200000 150000 100000 50000 0 NU CAN	TOB FC	25000 (Jul 20000) (Jul 15000) (Jul 10000) (Jul 1000) (Jul 100) (Jul 1000) (Jul	p<0.05	<i>p</i> <0.01 • • •	Oral inflammation mar a panel of 37 inflammati
p < 0.05 p <	0.05 • TOB EC	3500 3000 (1 2500 2000 3000 1500 1500 500 0	p<0.05	0<0.05 • • • • • • • • • • • •	 Our initial findings among cannabis si e-cig users. Pro-inflammatory cannabis and tobac didn't reach signific Chronic inflammati factor, with a critica Further research is the varied inflam product users. This work was supp Center (Oueimado) a
2000 (1 1500 1000 500 0 NU CAN	o<0.05	150 (JW/g) 100 50 0	p<0.005	o<0.005	
Dral inflammation markers were measured in participants saliva using A panel of 37 inflammation markers (Bio-plex).					Dr. Queimado holds Chair in Otorhinolaryr







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rkers were measured in participants saliva using tion markers (Bio-plex).

Conclusion

indicate distinct oral inflammatory patterns mokers, combustible tobacco smokers, and

markers were increased in combustible cco users. e-cig users showed an increase but cance.

ion is recognized as a significant health risk l role in cancer development and progression. needed to better elucidate the implications of mation patterns observed across different

Funding

ported by TSET Health Research Promotion and the NIH/NCI (R01CA242168, Queimado). a Presbyterian Health Foundation Endowed ngology.