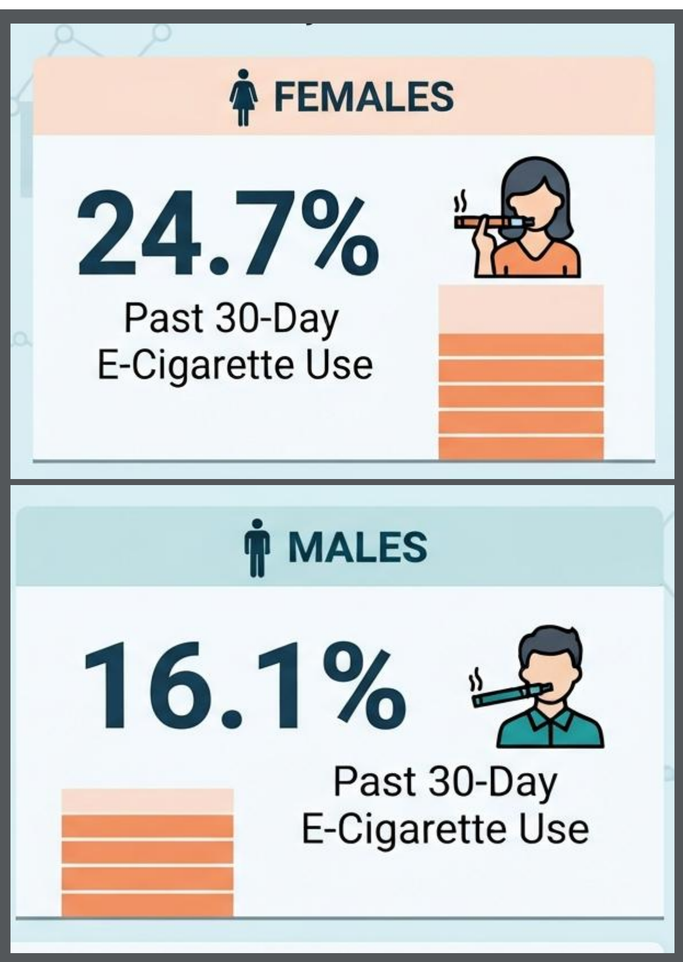
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Social Media Exposure and Gender Disparities in Vaping among a Population of South African High School Students

Kudenga R[1], Egbe C.O.[2], Ayo-Yusuf A.O. [3]

[1]Department of Odontology, University of Pretoria, Pretoria, South Africa; [2]Mental Health, Alcohol, Substance use and Tobacco Research Unit, South African Medical Research Council, Pretoria, South Africa; [3]African Tobacco Industry Monitoring and Policy Research Institute, School of Health Systems and Public Health, University of Pretoria, Pretoria, South Africa



High prevalence of e-cigarette use among high school female students may be mediated through longer hours of social media exposure and higher engagement on Facebook.

To ensure an inclusive and sustainable public health response, interventions must target Facebook and address the unique vulnerability of female high school students.

Figure 1: Past 30-day E-cigarette use by Gender

Introduction

As adolescent e-cigarette use (vaping) escalates globally, vaping among adolescents in South Africa has also risen rapidly. Recent research shows that prevalence of e-cigarette use is high among South African adolescents. In 2021, the Global Adult Tobacco Survey reported that 3.1% of South Africans aged 15-24 years currently used e-cigarettes[1], and a 2023 survey of over 25,000 South African high school students (grades 8-12) found that just over 16% used e-cigarettes[2].

To advance health equity and sustainable tobacco control, it is critical to understand how digital environments influence e-cigarette use initiation.

The aim

To examine the association between social media engagement and adolescent e-cigarette use.

Methods

A survey was conducted among high school students in Pretoria (N=696). A Multivariable logistic regression was used to analyse the relationship between current e-cigarette use (past 30-day use) and several independent variables: total daily social media hours (SM-Hours) and specific platform use (Facebook, TikTok, Instagram, Twitter, Snapchat, YouTube). The model was adjusted for age and sex.

Results

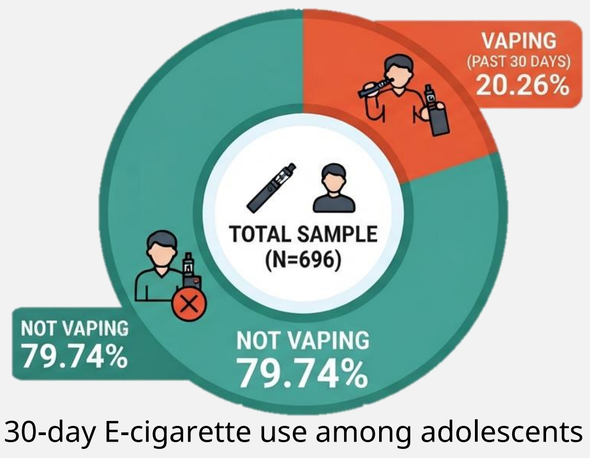


Figure 2: Past 30-day E-cigarette use among adolescents in Tshwane, South Africa

Current e-cigarette use was the highest among those with Facebook profiles (33.9%). Conversely 9.9% of current e-cigarette users had a YouTube profile. Compared with males, females reported higher Social Media Hours (4.1 vs. 4.9; $p < 0.001$).

Variable	Odds Ratio	95% Confidence Interval	p-value
Social Media Hours	1.13	1.03 – 1.23	**0.002**
Social Media Profiles:			
Facebook	3.37	2.11 – 5.17	**<0.001**
Twitter	2.32	0.94 – 5.73	0.068
Instagram	1.34	0.84 – 2.15	0.216
Snapchat	0.56	0.29 – 1.09	0.087
TikTok	0.89	0.56 – 1.40	0.613
YouTube	0.28	0.16 – 0.51	**<0.001**
Age (16 yrs & over) (Ref: <16 yrs)	1.70	1.11 – 2.74	**0.017**
Gender (Ref: Male)			
Female	1.27	0.80 – 2.01	0.318

Table 1: Multivariable Logistic Regression Analysis of Factors Associated with Past-30-Day E-Cigarette Use Among Adolescents

Future Research

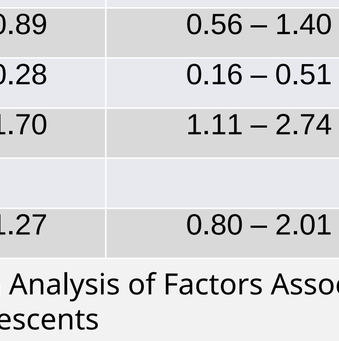
Focus group discussions will be conducted to explore social media influences on adolescents e-cigarette use. Whether social media protects or influences initiation.

References:
1. National Department of Health (NDoH) SAMRCS. Global Adult Tobacco Survey South Africa 2021: South African Government: Department of Health; 2024 [Available from: https://www.health.gov.za/wp-content/uploads/2024/06/2021-Global-Adult-Tobacco-Survey-South-Africa-Report-Launched-13-June-2024_compressed-1-1.pdf
2. van Zyl-Smit RN, Filby S, Soin G, Hoare J, van den Bosch A, Kurten S. Electronic cigarette usage amongst high school students in South Africa: a mixed methods approach. eClinicalMedicine

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University of Pretoria
Dr Rutendo Kudenga
Department of Odontology
School of Dentistry
Pretoria, South Africa

E-mail: rutendo.kudenga@up.ac.za
Phone: +27 12 3192930



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