

Respiratory Health Effects of E-Cigarette Use Compared to Conventional Smoking: A Cross-Sectional Study

Hawazin Fallatah

King Abdulaziz University, Saudi Arabia

Rajaa Al-Raddadi

King Abdulaziz University, Saudi Arabia

Eman Kamal

King Abdulaziz University, Saudi Arabia

Abstract:

Background: The use of e-cigarettes has increased worldwide, particularly among young adults, and is often perceived as a safer alternative to conventional smoking. However, evidence regarding their impact on respiratory health remains limited and inconclusive.

Objective: To compare respiratory symptoms and health-related quality of life between exclusive e-cigarette users and exclusive conventional cigarette smokers.

Methods: A cross-sectional study was conducted using an online questionnaire distributed among adults. Data collected included demographic characteristics, smoking status, and respiratory outcomes assessed using the modified Medical Research Council (mMRC) dyspnea scale and components of the St. George's Respiratory Questionnaire (SGRQ). Participants were categorized into exclusive e-cigarette users and exclusive conventional cigarette smokers. Statistical analysis was performed using appropriate comparative tests.

Results: A total of 332 participants were included in the analysis, of whom 96 were exclusive e-cigarette users and 72 were exclusive conventional smokers. Conventional smokers reported a higher frequency of respiratory symptoms, including cough, sputum production, and dyspnea. They also demonstrated greater dyspnea severity and poorer respiratory-related quality of life compared to e-cigarette users.

However, these differences were not statistically significant ($p > 0.05$).

Conclusion: Although conventional cigarette smokers exhibited a higher burden of respiratory symptoms, the absence of statistically significant differences suggests that e-cigarettes may not be a risk-free alternative. The comparable respiratory symptom profiles between groups raise concerns regarding the safety of e-cigarette use. Further longitudinal studies are warranted to evaluate long-term respiratory outcomes.