

BACKGROUND

Prevalence of e-cigarette use in adolescents had been increasing.

Whether e-cigarette use causes adolescents to take up smoking is of public health concern.

AIMS

To evaluate the impact and strength of confounding in the relationship between e-cigarette use and smoking in youth.

DESIGN

Protocol
- Pre-registered protocol on PROSPERO,
- Adhere to PRISMA guidelines

Inclusion criteria
- Design: Longitudinal
- Population: Adolescents who have never smoked
- Exposure: E-cigarette use
- Comparison: No e-cigarette use
- Outcome: Smoking at follow-up

RETHINKING THE CAUSAL LINK BETWEEN E-CIGARETTE USE AND SMOKING

AN INNOVATIVE APPROACH TO EVALUATE CONFOUNDERS

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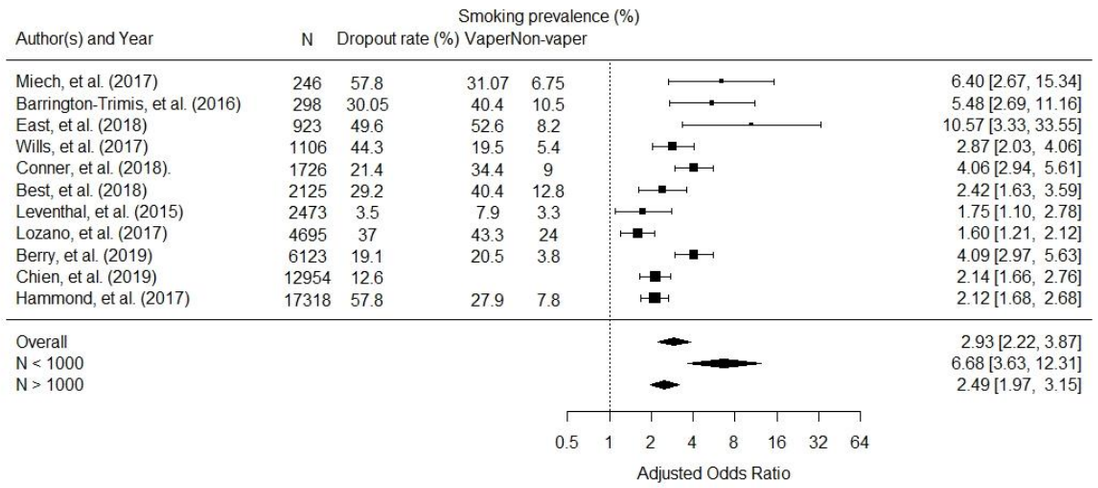
METHOD

Systematic search & screen

Extract data & meta-analysis

Evaluate quality & E-value

KEY FINDINGS



Meta-analysis showed a significant relationship between e-cigarette use and smoking, but drop-out rates were high. Only 2 studies adjusted for potential confounding comprehensively, median E-value=2.90.

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FINDINGS cont.

Studies with smaller sample sizes reported larger odds ratios.

Median attrition rate of the included studies: 30%.

All but one study reported results from completed sample analysis, despite high loss to follow-up.

CONCLUSIONS

There is a longitudinal association between adolescent vaping and smoking initiation, but current evidence is limited by publication bias, high sample attrition, and inadequate adjustment for important confounding factors.

ACKNOLEDGEMENTS

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REFERENCES

Chan et al (2020) Gateway or common liability? Addiction https://doi.org/10.1111/add.15246