

## **The combined effect of socioeconomic position and neighbourhood deprivation on smoking in France: a propensity score analysis**

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## **Abstract**

**Background:** Tobacco consumption follows a socioeconomic gradient. In France, although overall smoking rates have declined over the last decade, the prevalence of daily smoking has more recently increased among individuals with the lowest socioeconomic position (SEP), especially during the Covid-19 pandemic. Literature suggests that the level of neighbourhood deprivation is also associated with tobacco consumption, and this association might vary by SEP. However, the existing literature does not sufficiently address selective mobility, rendering it difficult to separate compositional and contextual effects.

**Aim:** To determine the effect of neighbourhood deprivation on tobacco consumption, and the role of individual SEP within this association.

**Methods:** Using data from the French TEMPO cohort study, we estimated propensity scores and conducted pooled, cross-sectional logistic regression models weighted by inverse probability weights to estimate the relationship between smoking status, the French Deprivation Index, and individual socioeconomic position.

**Results:** The analysis was conducted on 1,090 participants with an average age of 35 years, primarily comprised of women (63.0%). The results of the inverse probability-weighted model indicated that across all neighbourhood deprivation tertiles, the odds of smoking were higher for individuals with a low SEP compared to those with a higher SEP. We found that individuals with a low SEP living in the most deprived and least deprived areas had 1.73 (95%CI=1.23, 2.44) and 1.74 (95% CI=1.17, 2.6) greater odds of being smokers, respectively, compared to individuals with a high SEP in the least deprived areas.

**Conclusion:** In the first study of its nature in France, individual-level socioeconomic position was found to be more strongly associated with smoking than neighbourhood deprivation. However, longitudinal research is needed to establish any causal conclusions.

**Conflict of interest statement:** The authors have no conflicts of interest to declare. None of the co-authors have any links with the pharmaceutical, tobacco, alcohol, or e-cigarette industries, or with gaming companies.