

## CT 1.1.5

### Is social and structural prestige associated with current and future smoking?

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#### Introduction

Smoking remains the most significant preventable cause of mortality in developed countries, and many studies have attempted to explain the aetiology of smoking behaviour.

There is substantial evidence that social norms and the behaviour of others influence adolescent smoking behaviour. One important social influence is the role of opinion leaders and other prestigious individuals who are thought to propagate behaviour within communities. These individuals who are often highly visible in their peer group can act as positive or negative role models and also act as a source of reinforcement and contagion.

Opinion leaders and prestigious individuals have a number of measurable characteristics which identify them as being more influential than others in their community, including being highly central within an extensive interpersonal network and having greater social participation. As such, it is possible to identify individuals who are likely to assume this role within a community and examine their propensity to engage in particular behaviours, and therefore the likelihood that they may influence the behaviour of others in their community.

A number of studies have been conducted which have aimed to examine whether a number of structural measures of opinion leadership (for example popularity in the form of number of ties made to others in their friendship network (1-3)) are associated with adolescent smoking but none have examined the association between smoking and the more social aspects of opinion leadership.

In response, this paper aims to answer three questions:

- Is structural prestige associated with smoking in early adolescence?
- Does structural prestige predict smoking uptake?
- Does social prestige predict smoking uptake?

#### Methods

The evaluation of the ASSIST intervention involved almost 11,000 11-12 year old students in 59 schools at baseline. The current study used data collected from 1,860 young people in four control and six intervention schools involved in ASSIST. Year 8 students (12-13 years old) provided self-report data on social prestige (T1), smoking behaviour (T1-T4) and friendship (T2-T4). Measures of structural prestige (degree centrality, two-reach, betweenness centrality) were calculated from social network data collected at T2 using UCINET.

Logistic regression was used to correlate T1 measures of social prestige and T2 measures of structural prestige with smoking behaviour at T2, T3 and T4 (controlling for parental smoking, alienation from school, SES, gender and trial intervention status) to ascertain whether they are associated with current and future smoking habits. Univariable models were run for each variable and odds ratios calculated. Each measure of prestige was also tested in a multi-variable model.

## Results

Both social prestige and measures of structural prestige are associated with having ever smoked at T2. However, none of these measures predicted weekly smoking one year (T3), or two years later (T4).

## Discussion

These findings support those of Alexander *et al* (1) who included only one measure of prestige (popularity). However, they demonstrate that these are not the only factors associated with current reports of ever smoking. Unlike Ennett and colleagues (3), this study did find evidence of a cross-sectional association between smoking behaviour and measures of structural prestige, although the measures used and analysis methods are not directly comparable. However, contrary to longitudinal findings which ascertained an association between popularity and smoking, or no association between measures of structural prestige and smoking (2, 3), this study found closeness to be associated with weekly smoking at T3 although no association was found between measures of social and structural prestige and weekly smoking a year later. Thus, we propose that Year 8 prestige is a weak marker for smoking in Year 10 but not a predictor of smoking uptake.

The value of influential opinion leaders has been recognised in the field of health promotion, and an adolescent smoking intervention has utilised young people identified as opinion leaders by their peers to actively promote non-smoking behaviour amongst their year group (4, 5). Had there been a significant association between current and future smoking behaviour during adolescents, targeting students own smoking behaviour on the basis of structural or social prestige may have also proved an effective strategy for smoking prevention interventions. However, we did not find this to be the case and suggest that further longitudinal analyses are conducted which investigate the dynamic relationship between smoking uptake and changing social relationships, in order to inform the development of smoking prevention strategies.

## References

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