Factors associated with past use of smoking cessation treatment and six-month verified abstinence among socioeconomically disadvantaged smokers.

UNSW | NDARC National Drug & Alcohol Research Centre

VC Boland[1], RP Mattick[1], D Barker[2], PJ Clare[1], M Siahpush[3], H McRobbie[4], K Martire[5], R Borland[6], M Farrell[1], W Hall[7], CM Doran[8], B Bonevski[2], R West[9], RJ Courtney[1]

[1] National Drug & Alcohol Research Centre, Australia; [2] Newcastle University, Australia; [3] University of Nebraska Medical Center, United States of America; [4] Queen Mary University of London, United Kingdom; [5] University of New South Wales, Australia; [6] Cancer Council Victoria, Australia; [7] University of Queensland, Australia; [8] Central Queensland University, Australia; [9] University College London, United Kingdom.

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Background

Tobacco smoking and its associated harms are concentrated among low-socioeconomic status (SES) populations[1].

Factors contributing to disadvantage that are linked to differences in smoking rates include: social contexts of smoking; financial stress and economic instability; heavier nicotine dependence; lack of social support when quitting; and low adherence to smoking cessation treatments [2].

While Low-SES smokers are just as motivated to try to quit as the general population, they are less likely to succeed [3].

Little is known about the factors that promote or prevent smoking cessation treatment utilisation among low-SES treatment-seeking smokers.

Gaining a better understanding of the factors that drive treatment utilisation among "hard-to-reach"[4] low-SES smokers is needed to guide future targeted and tailored approaches aimed at improving treatment outcomes.

Aims

Using data from the *Financial Intervention for Smoking Cessation Among Low-income Smokers* (FISCALS) randomised controlled trail (RCT), the current study aims to:

- Examine factors associated with ever use of Quitline and pharmacotherapy treatment;

- Examine factors associated with six-month prolonged biochemically verified abstinence at eight-months post-randomisation.

The FISCALS sample

- Recruited in 2012-2014, nationally across Australia.

- Inclusion criteria: 18+ years; smoked 10+ cigarettes/day; motivated to quit; willing to use combination NRT; in receipt of a government pension or allowance (proxy for low-SES); able to complete four check-in calls over eight-weeks; and complete baseline, two-months, and eight-months interviews.

- 1,047 participants randomised.

- Russell Standard six-month biochemically verified abstinence (RS6) assessed at eight-months post randomisation.

- Participants must have produced a negative urine or saliva cotinine test (15ng/ml) to be classified abstinent.

Method

Prior smoking cessation treatment utilisation

Simple and multiple logistic regression models were used to examine factors associated with treatment utilisation prior to entering the RCT. Odds ratios (OR) and 95% confidence intervals (CI) were estimated.

Biochemically verified abstinence

Simple and multiple logistic regression models were used to identify factors associated with RS6 verified abstinence. Variables with p-values <0.25 in the simple models were included in the multiple logistic regression models to assess independent associations with the outcome.

Results

Participant characteristics (N=1047):

- 53% were female;

- Mean age was 46 years;

- 63% completed high school or less;

- 54% diagnosed or treated for a mental illness;

- Smoked an average of 24 cigarettes per day;

- 92% had previously tried to quit smoking.

Table 1. Factors associated with ever use of Quitline

Factors	Odds and 95% CI of ever use of Quitline	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Self-efficacy to quit	0.77 (0.66, 0.90)**	0.80 (0.68, 0.94)**
Mental illness	1.74 (1.25, 2.44)**	1.50 (1.01, 2.25)*
Residing in affluent areas	1.44 (1.01, 2.06)*	1.55 (1.04, 2.30)*
Female	1.65 (1.18, 2.31)**	1.68 (1.14, 2.48)**

* p<0.05 ** p<0.001

Table 2. Factors associated with ever use of pharmacotherapies (NRT, varenicline, bupropion)

Factor	Adjusted odds and 95% CI of ever use of Pharmacotherapy	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Unemployed	0.53 (031, 0.90)*	0.54 (0.31, 0.95)*

* p<0.05

Table 3. Independent factors associated with RS6 verified abstinence

Factors	Odds and 95% CI of RS6 verified abstinence (n=1047)	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Prior treatment utilisation	0.19 (0.08, 0.45)	0.39 (0.18, 0.83)
Mental illness	0.41 (0.21, 0.83)	0.20 (0.08, 0.50)

* p<0.001

Discussion & Implications

- This was a proactive treatment-seeking sample who had previously tried to quit and were motivated to quit at enrolment into the RCT.

- Factors associated with past use of Quitline and pharmacotherapy treatment included: higher levels of self-efficacy to quit; sociodemographic characteristics; and reporting a mental illness.

- Prior treatment utilisation and reporting a mental illness was associated with lower odds of achieving RS6 abstinence.

- While smoker characteristics are not modifiable, treatment services can be modified and tailored to meet the needs of smokers with a mental illness.

- Providing tailored smoking cessation treatment that increases uptake, quit attempts, and quit success among socioeconomically disadvantaged smokers is a public health priority to reduce overall smoking rates.

- Treatment-seeking low-SES smokers may be more receptive and willing to engage with new smoking cessation treatment approaches than other 'hard-to-reach' disadvantaged populations.

- Future research may overcome some of the barriers that prevent abstinence and smoking cessation treatment utilisation among low-SES by developing support that is tailored to mental health conditions.

References

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Contact: Veronica Boland, v.boland@unsw.edu.au