UK Society for Behavioural Medicine
9th Annual Scientific Meeting

“Behavioural Medicine: From Laboratory to Policy”

University of Oxford Examination Schools
Monday 9 and Tuesday 10 December 2013
Parallel Session B
Tobacco Control
14.10-15.25

Chaired by Rosie McEachan
A double-blind randomised controlled trial evaluating the efficacy of attentional retraining on attentional bias, craving and abstinence in smokers attempting cessation

Rachna Begh
A double-blind randomised controlled trial evaluating the efficacy of attentional retraining on attentional bias, craving and abstinence in smokers attempting cessation

Rachna Begh
University of Oxford

December 10, 2013
Background

- Short-term success rates with UK NHS Stop Smoking Services are high
  - 4 million quit attempts made
  - 2 million recorded as quit for at least 4 weeks
  (Department of Health, 2010)

- Risk of relapse is high
  - Over 75% quitters resume smoking within 1 year
  (Judge et al., 2005)

- No specific treatment offered for relapse prevention
  - Most interventions are unsuccessful (Hajek et al., 2009)
Attentional bias
Attentional bias measure – visual probe task

Images taken from McClernon et al. (2007) stimulus set
Attentional retraining – modified visual probe task

Images taken from McClernon et al. (2007) stimulus set
ARTS trial

- **Study aim**
  - Examine efficacy of attentional retraining on attentional bias, craving, withdrawal symptoms and relapse in treatment-seeking smokers

- **Methods**
  - Smokers >18 years, >10 cigarettes per day, seeking to quit smoking
  - Recruitment from GP practices and community venues within HoB tPCT, BEN PCT, Sandwell PCT, Walsall PCT, Birmingham Community Healthcare Trust
  - 5 weekly sessions of attentional retraining (AR) or control training alongside standard withdrawal-oriented support and 21mg/24 hour nicotine patches
Primary outcomes

- **Change in attentional bias**
  - Visual probe task assessment
  - Difference in median reaction time between stimulus type at baseline and 4 weeks post-quit

- **Change in cravings and withdrawal symptoms**
  - Mood and Physical Symptoms Scale (MPSS), items rated 1-7
  - Composite scores for MPSS-C (craving), MPSS-M (withdrawal) up to 4 weeks post-quit
Secondary outcomes

- **Prolonged abstinence**
  - Biochemically validated at 4 weeks post-quit using the Russell standard (West et al., 2005) by means of expired carbon monoxide, with a cut-off point of <10ppm.
Results

- **Participants**
  - 119 randomised
  - Gender ratio (M:F)=49:69
  - Age (yrs)=44.8 (SD=12.7)
  - Mean FTND=5.5 (SD=2.3)
  - Mean CPD=20.8 (SD=9.2)

No significant attentional bias towards smoking-related pictures vs neutral pictures was found in the sample at baseline (mean difference=3.2; \( t[115]=1.16, p=0.25 \))
Results

Mean = 3.2112
Std. Dev. = 29.77905
N = 116
Primary outcome (1) – change in attentional bias

Lower scores in abstainers in the AR group than the control group post-training but no significant differences ($\beta=-4.15$, $p=0.56$, 95% CI=$-18.29$, 10.00)
Results

- Primary outcome (2) – change in craving, MPSS-C scores

Non-significant reduction in craving among AR abstainers compared to control abstainers ($\beta=-0.19$, $p=0.74$, 95% CI=$-1.30$, 0.93)
Results

- Primary outcome (3) – change in withdrawal, MPSS-M scores

Non-significant increase in withdrawal in the AR group compared to the control group ($\beta=0.77$, $p=0.50$, 95% CI=$-1.45$, 2.98)
Results

- **Secondary outcome (1) – prolonged abstinence**
  - At 4-weeks post-quit
    Intervention group 30/60 quitters
    Control group 29/58 quitters
    No significant difference between groups
    (RR=1.00, 95% CI=0.70, 1.43)

- At 6 months post-quit
  No significant difference between groups
  (RR=1.07, 95% CI=0.47, 2.45)
Conclusions

- Multiple sessions of AR delivered weekly alongside routine smoking cessation treatment had little effect on attentional bias and smoking cessation outcomes.
  - Perhaps insufficient number of retraining sessions?
  - Extinction of retraining effects between sessions?
  - Poor measurement of attentional bias? (Ataya et al., 2012)

- Further work is necessary on developing attentional retraining procedures and on improving the measurement of attentional bias.
## Acknowledgements

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References

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