

The Role of Stress in an Age- progression Facial Morphing Smoking Intervention: Preliminary Results.

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Smoking Behavior in the UK.



- One in five adults in the UK smoke, although rates of smoking have almost halved since 1974 (ASH, 2018).
- Surveys indicate that the majority of current smokers would like to quit (Office for National Statistics, 2017).
- It is estimated that only 19.8% of individuals in the UK who make a quit attempt are successful within 12 months of the attempt (Brown & West, 2017).

Background

The Present Research

The current pilot study aimed to

1. Explore the preliminary results regarding the efficacy of the intervention.
 2. Explore if stress reactivity during the intervention changed from pre-intervention to during the intervention.
- Women aged 18-55 recruited through block randomisation
 - Mixed method investigation through block recruitment

Age Progression Facial Morphing Intervention



Methodology



Instruction Type Conditions

- Participants were block randomized to view the intervention with the guidance of either Neutral or Reassuring instructions

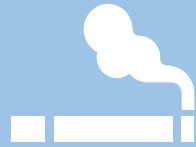
Neutral

“please can you close your eyes and open them when I tell you to. You will see your face aged to 72.”

Reassuring

“please can you close your eyes and open them when I tell you to open them, it can be a bit unexpected, do not be alarmed you will just see your face aged to 72”

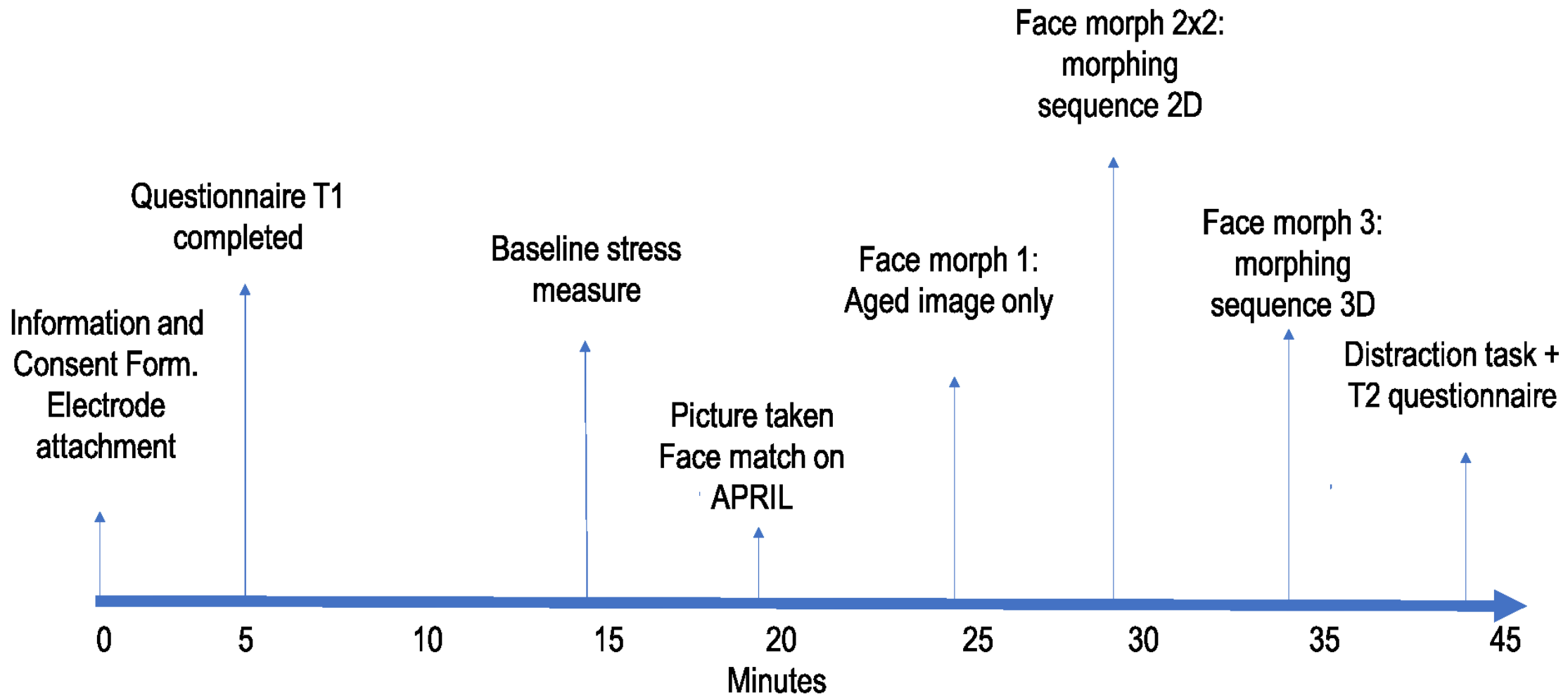
Measures of Smoking

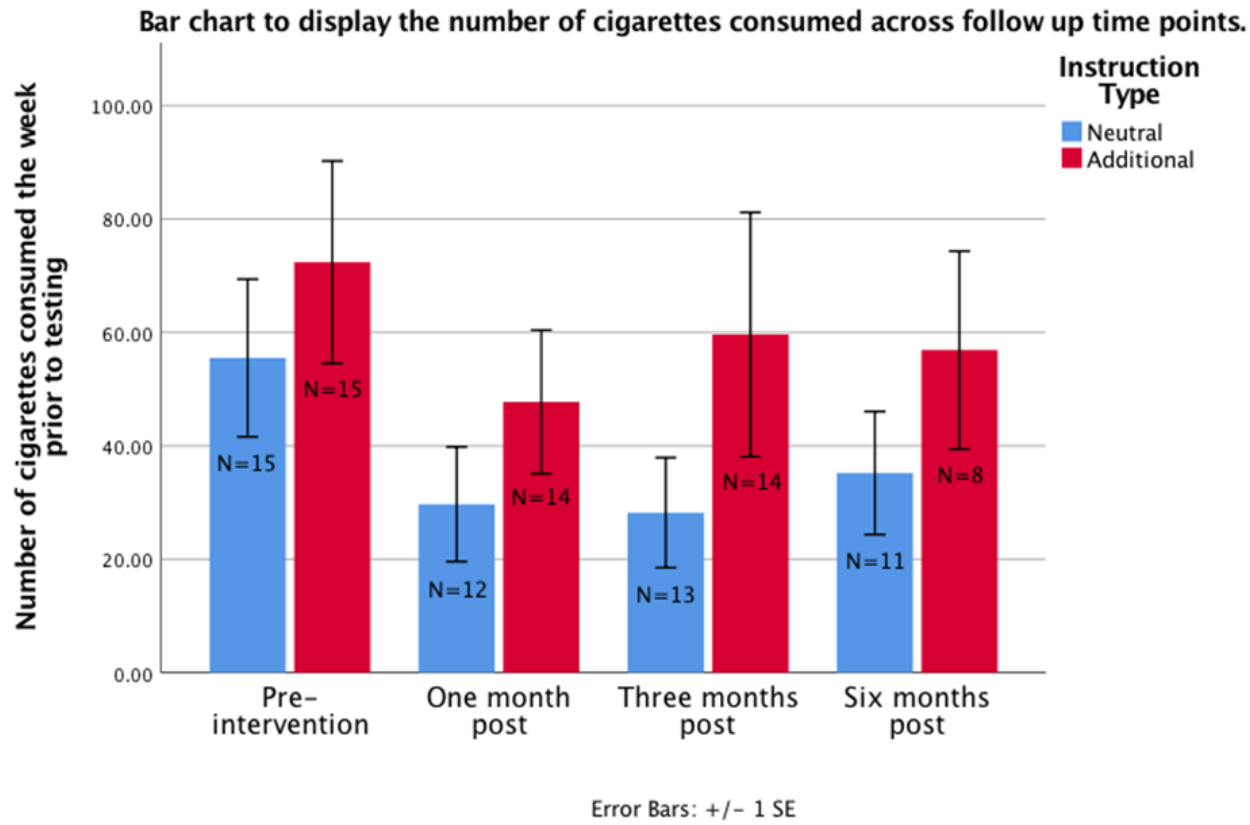


Self-report smoking behaviour- Self report number of cigarettes consumed in the past week summed to create a measure of number of cigarettes consumed.



Smoking Cognitions- Participants were asked to report their cognitions about smoking behaviour, the items are based on Ajzen's (1991) theory of planned behaviour constructs.





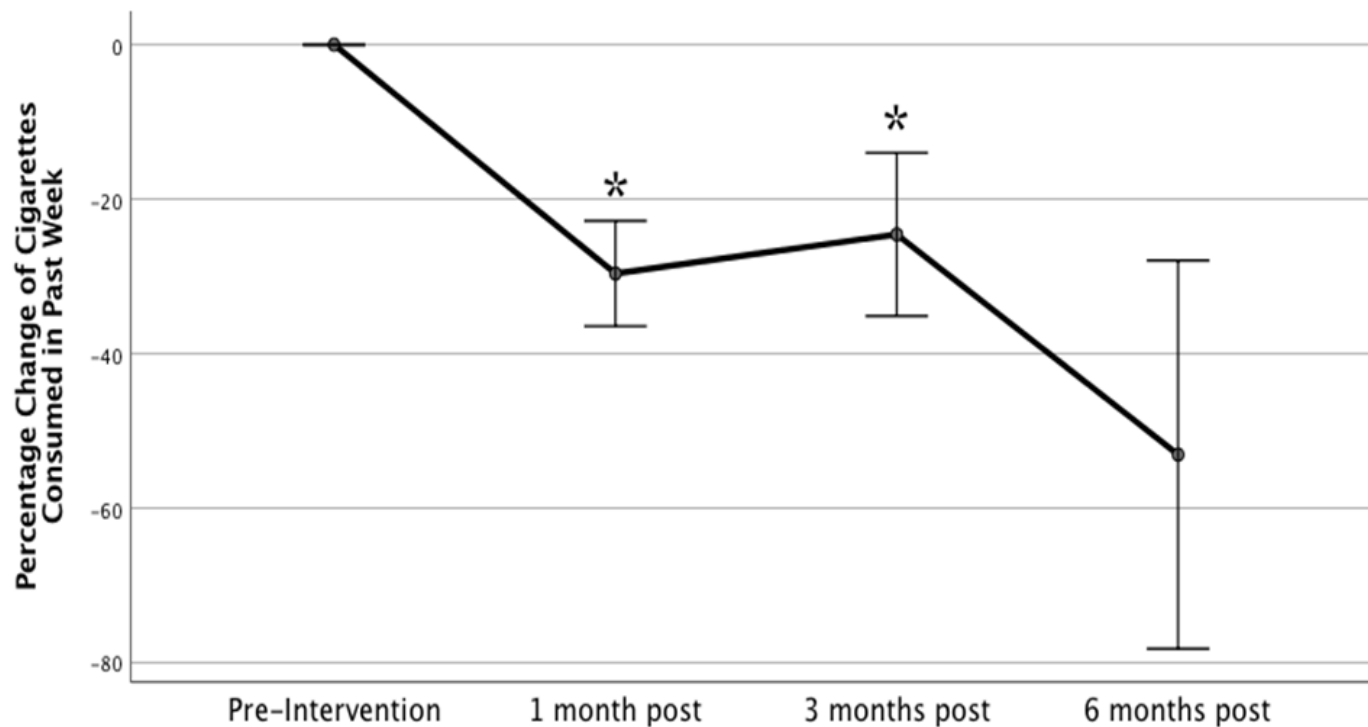
The bar graph displays the level of smoking behavior for the instruction type groups and retention of participants over the follow up time periods.

Participants in each instruction type group were equally likely to respond to follow up data collection.

At six months 27% of participants were lost to follow up.

Cigarettes consumed

Percentage Change in Amount of Cigarettes Consumed from Pre-intervention to Follow up Time Points



significant differences between percentage change in cigarettes consumed from pre-intervention to one month post-intervention (1.312, $p=.004$)

Analysis by instruction type revealed that smoking behaviour remained significantly reduced at three months post-intervention only in the Neutral instruction group ($p=.03$).

Smoking behaviour

Stress Response

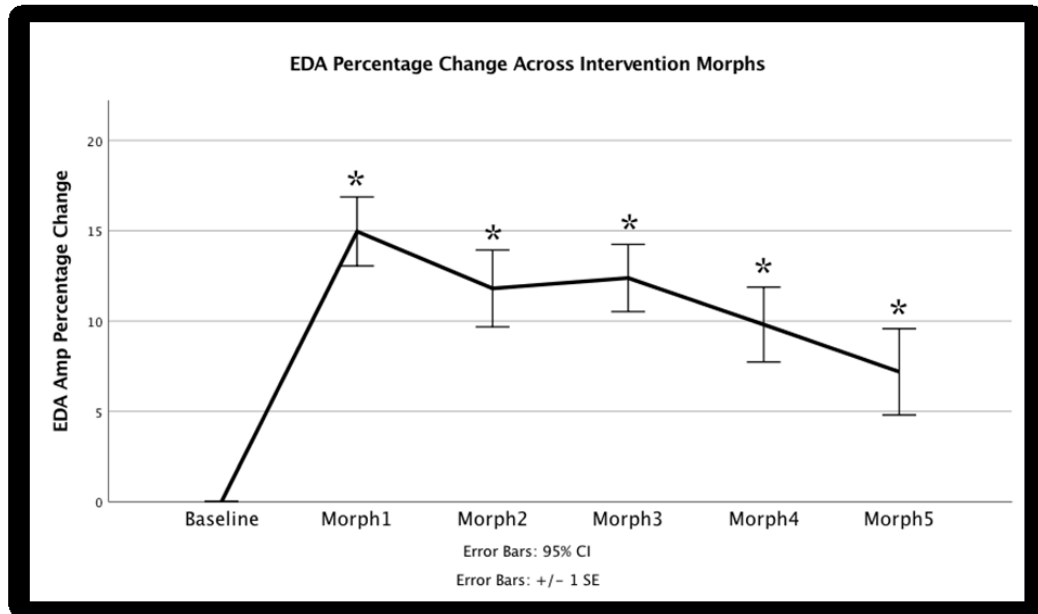


Figure 4. Line graph to display EDA percentage change across intervention Morphs.

*= $p < .05$ vs Baseline, Error Bars +/- 1 SE

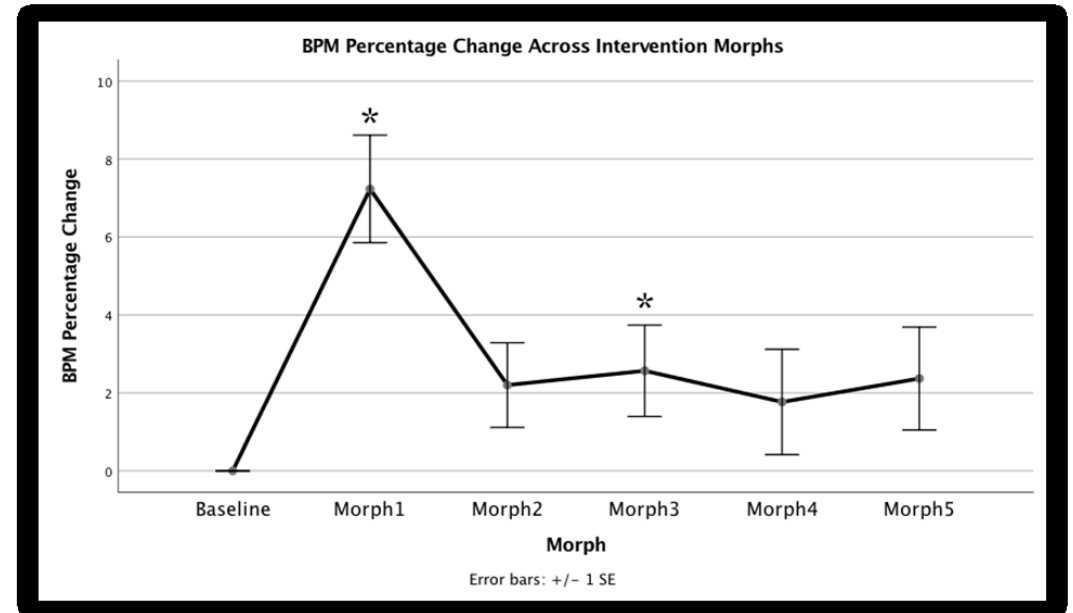
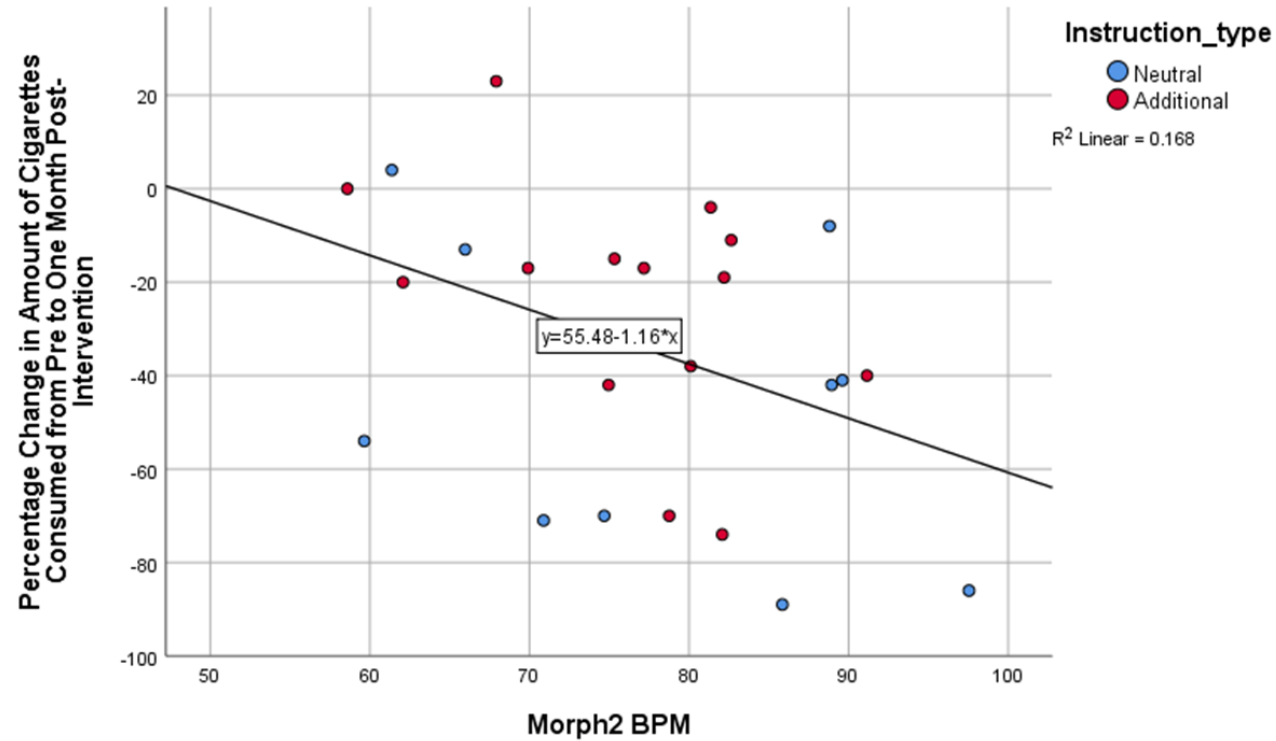


Figure 5. Line graph to display BPM percentage change across intervention Morphs.

*= $p < .05$ vs Baseline, Error Bars +/- 1 SE

Simple Scatter to Display the relationship Between the Percentage Change in Cigarettes Consumed from Pre to One Month Post-intervention and Morph2 BPM



A significant positive relationship was observed between the percentage change in smoking behaviour from pre-intervention to one months post and BPM during the intervention

($r = -.410$, $n = 25$, $p = 0.042$)

Stress and smoking
behaviour

Discussion

First of its kind to measure the physiological response to the intervention, in order to assess the impact this 'stress' had on the intervention outcome.

The results indicate that the intervention **elicited a physiological stress response** in all participants. Echo themes and subthemes present within the qualitative evidence on the intervention in women (Grogan et al., 2011b) and men (Flett et al., 2017).

Results suggest that the **more stressed** the participant was during intervention delivery, the **higher decrease in cigarette consumption** at one month post-intervention.

Previous research in health behaviour change suggests **both worry for health and worry for appearance** consequences (Magnan, 2017) is associated with behaviour change.

Plans for future research including a control group sample and covariate analysis in order to reduce risk of bias and confirm findings.

Limitations

Sample consisted of mainly white British women of a similar level of education.

Ethical issues of drawing women's attention to appearance are raised.

Previous research indicates women perceive natural aging images as positive, therefore the intervention can promote natural aging as an alternative.

Block developments may influence experience of intervention



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Thank you to the research team!

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- Dr. Brian McMillan, University of Manchester
- Prof Chris Armitage, University of Manchester
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