Introduction

Facial composites are pictures of faces constructed from a witness’s memory and are used by the police to bring perpetrators to justice.

Past research (Jones, 2011) has shown that:

Accuracy of likeness varies depending on the different composite software used:

• Feature systems, such as PRO-fit, are more accurate in terms of their individual facial features (eyes, nose, mouth, etc.).

• Holistic systems, such as EvoFIT, are more accurate in terms of their relational features i.e. the spacing of these features.

Manipulations on composites were carried out e.g.:

• Image blurring decreased correct identification rate for PRO-fit, but not EvoFIT.

• Image inversion had the opposite effect.

• Stretching improved identification.

Aim:

To replicate past research using more realistic procedures:

• Target faces which are unfamiliar to participants.

• Longer delay between face seen and composite constructed.

Method

Composite construction

• Participants viewed an unfamiliar face of a UK footballer for 60 seconds.

• After a two day delay, the viewed face was first recalled (via cognitive interview), and then constructed with appropriate computer software (EvoFIT or PRO-fit).

A number of manipulations were then carried out on facial composites (see Figure 1 for example items).

Composite naming

• A different group of participants were in one of 28 conditions (see Figure 2) and presented with a set of composites to name before and after original photographs were shown.

Results

• Composite naming (percent correct) is shown in Figure 2.

• Linear regression analysis revealed no significant differences between composite systems nor between composite presentations.

• A Chi Square analysis indicated that an overall effect of blurring approached significance (p = 0.06).

Conclusion

It is likely that the unexpected results may have been caused by:

• The target photographs and the participants’ familiarity to the targets.

• A lack of difference in accuracy of likeness of internal features between composite systems.

References