

PEOPLE WITH A MILD LEARNING DISABILITY AND THE CONSTRUCTION OF FACIAL COMPOSITES

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Summary: Victims of crime and witnesses to crimes where the perpetrator is unknown are often required to provide a facial description of the perpetrator's face to the police. The quality of this description can play a crucial role in the criminal investigation procedure. Individuals with a mild learning disability (mLD) often have limited verbal abilities (Emerson, 2001), which might act as a barrier to them providing reliable evidence. This research project investigates the ability of witnesses with mLD to recognize and describe faces, and to use existing and newly developed facial composite systems such as E-fit (Electronic Facial Identification Technique) and Evofit (Evolutionary Facial Identification Technique). To date, a survey was designed to collect information on composite systems currently utilized by UK law enforcement agencies and the attitudes and experiences of operators regarding witnesses with LD. An experimental study compared the ability of participants with LD to recognize and describe faces to that of non-mLD participants. A second experimental study examined whether the inclusion of visual prompts would help people with mLD to provide better descriptions of unfamiliar faces. The forensic implications of the findings will be discussed as will possible future research directions.

INTRODUCTION

"...aside from a smoking pistol, nothing carries as much weight with a jury as the testimony of an actual witness." (Loftus & Ketcham, 1994, p.16). Eyewitness testimonies frequently play a crucial role in criminal investigations (Wrightsmann & Fulero, 2005), yet the reports of eyewitnesses are often far from infallible (Wells, 1998). Past and current research in the eyewitness domain repeatedly illustrates that the accuracy of eyewitness recall and recognition can be influenced by several variables (Wells, 1998). One of those influencing variables might be whether the witness has a learning disability or not. mLD might have a serious impact on the reliability and accuracy of an eyewitness account, since it negatively influences several cognitive skills, such as memory, language comprehension and production, decision making and logical reasoning (Ceci, 1986 & Wong, 2004).

The prevalence of people suffering from mLD is high in the UK (2.5%), with research indicating a likely increase in the future (Emerson, 2001). Furthermore, statistics show that people with mLD are disproportionately vulnerable to victimisation and therefore likely to become witnesses of crimes (Kebbel & Hatton, 1999). For these reasons it is important to investigate the performance of people with mLD as eyewitnesses, specifically their ability to describe and recognise faces (Wilcock, Bull & Milne, 2008).

So far, little research has looked at the ability of witnesses with mLD to recognize and describe faces. Despite the lack of research, the majority of people believe that individuals with learning disabilities are less credible and accurate witnesses (Stobbs and Kebbell, 2003; Peled, Larocci and Connolly, 2004). For instance, the Association of Chief Police Officers (ACPOS) *National Working Practice in Facial Imaging* document states that, "serious consideration should be given to the potential evidential value and accuracy of the recognition and recall factors from witnesses who are mentally impaired".

In a recent Scottish crime case, a woman with serious learning difficulties was raped and assaulted by several men. No prosecution emerged primarily because she was considered as an unreliable witness by The Crown Office. The victim who is 67 years old has a mental age of eight and was abused several times between 1999 and 2006. The abusers are still living close by, making it impossible for her to get back to a normal and safe life (Severin, 2008).

This example clearly shows that, in the absence of relevant scientific evidence, individuals with mLD are more likely than their non-mLD counterparts to be excluded from normal criminal justice procedures. To guarantee that individuals with mLD are treated in a fair and reasonable way by the criminal justice system, more research is needed to investigate their ability to participate in normal investigative procedures such as the need to describe unfamiliar faces.

MAJOR FINDINGS TO DATE

1. Experimental Study: Face recognition and description in people with mild learning disabilities

The first experimental study, compared the ability of participants with mLD to recognize and describe faces to that of non-mLD participants. Participants with mLD were recruited from an Adult Resource Centre in Dundee. Control participants were recruited from students attending the University of Abertay Dundee. Overall, 60 participants took part in the study, 30 individuals with mLD and 30 without. The study included three tasks: an old/new face-recognition task, and two face-description tasks. The participants recruited as having an mLD also completed the Wechsler Abbreviated Scale of Intelligence (WASI). This allowed an exploration of a correlation between cognitive functioning and performance. During the recognition tasks, a between-group design was used with two groups: mLDs vs. non-mLDs. The dependent variable was performance accuracy. During the description tasks a 2 (group: mLDs vs. non-mLDs) x 2 (recall condition: free recall vs. cued recall) x 2 (task: description from memory vs. description from photo) mixed design was utilized. Here, the dependent variable was quantity and quality of facial information provided by the participants.

The recognition data revealed that participants with mLD performed significantly less accurately on the old/new face recognition tasks (70% correct) than their non-LD counterparts (98% correct). Although their performance was lower, it still was above chance level, indicating that they were able to complete the task. During the face-description task, both participants with mLD and the controls mentioned more details during the cued recall than during the free recall. This finding is consistent with previous research (Memon and Bull, 1999). When it comes to the amount of accurate information, trends indicated that controls provided more accurate details during the free recall than during the cued recall. Interestingly, the opposite was true for the mLD participants. This group benefited more from the cued recall conditions, thus providing more accurate details during the cued recall than during the free recall.

Taken together, these results suggest that there is initial evidence that people with mLD are consistently poorer in performance on face recognition and recall tasks, fitting with the generally held layman's view that they might be less reliable eyewitnesses. However, there is also evidence that people with mLD exhibit variability in performance dependent on the task, and this suggests they might benefit from measures introduced to facilitate performance.

2. Experimental Study: Do visual prompts help people with mild learning disabilities to describe faces?

The second experimental study investigated whether the inclusion of visual prompts might help people with mLD to provide more detailed facial descriptions. The rationale behind this experiment was based on the findings of Experiment One and research carried out by Paine, Pike, Brace & Westcott (2008). A 2 (group: mLDs vs. non-mLDs) x 2 (description condition: from memory vs. from photo) mixed design was used with one between-subject factor (group) and one within-subject factor (description condition).

Overall, 60 participants took part in the study. Of those, 20 were participants with mLD and 40 were control participants. Participants with mLD were service users from another two Dundee Day Care Centres and one in Kirkcaldy. Control participants were again students from the University of Abertay Dundee.

It was assumed that participants with mLD would use the visual prompts in a similar way to controls. Although, the controls showed a high degree of consistency in the selection of the visual prompts, indicating that they were not selecting prompts randomly, participants with mLD did not exhibit the same pattern of responses and therefore the utility of these cues is argued to be questionable.

FUTURE WORK

Current experimental work is investigating the performance of people with mLD when using E-fit (Electronic Facial Identification Technique). E-fit is a computer software program, with which a trained operator can produce facial composites of a suspect, based on an eyewitness description. Witnesses with and without mLD are required to use the E-fit system, with and without the target faces in view. The in view condition allows an investigation of the way an individual with mLD might interact with the software and the operator. The out of view condition allows an investigation of the way memory may impact on this interaction. Composites are being constructed on the basis of the facial descriptions provided by the participants. The quality of the resulting composites will be evaluated by an independent sample of participants using a matching task and a likeness rating task. The results of this study will provide an insight into any difficulties that the mLD group may have when using existing composite construction packages. In a further future experimental study, participants with mLD will construct facial composites with E-fit and the newly developed Evo-fit system. Evo-fit is a holistic, evolutionary composite system. During the Evo-fit composite construction process, faces are modeled as a whole and not separated into their individual parts. Importantly, the system does not require the generation of a verbal description. Given the results of the previous experimental studies indicate that people with mLD may have difficulties in generating verbal facial descriptions, Evo-fit may be a more suitable composite program for them to use.

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