Do patients suffering from Alzheimer's disease present an own-age bias in face recognition?

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Do patients suffering from Alzheimer's disease present an own-age bias in face recognition?

Abstract

Face perception depends both on the face and on the individual who perceives it. Some factors such as gender, ethnicity or age may influence face perception processing. For instance, recognition memory for faces of one's own age group is often superior to memory for other-age group faces. This bias is known as the Own-Age-Bias (OAB). OAB has been extensively studied in healthy subjects. However, to our knowledge, no article has been published on elder adults suffering from Alzheimer Disease (AD). Therefore, the present research aimed at studying the OAB in patients with AD in comparison with healthy old adults and healthy young adults. Sixty participants were included: 20 young adults, 20 healthy old adults, and 20 elder patients who met NINCDS-ADRDA criteria for probable AD. Participants performed an age estimation task followed by a face recognition task. Indeed, for each photograph, subjects were asked to say if the face looked young or old and to give a yes/no judgment of familiarity (after an encoding phase). Participants also completed a questionnaire assessing their frequency of contact with young and old adults.

Although estimates of sensitivity indicated no age bias in AD patients, when memory bias was corrected according to their performance we found evidence in favor of an OAB in this group. Both healthy groups presented an OAB, in particular when the corrected memory bias was considered. However, no significant correlations were found between their frequency of contact with young/older people and the number of correctly identified faces, false alarms, sensitivity and corrected memory bias. Therefore, although AD patients present a deficit in face-memory, they still present memory bias towards same-age group faces when their difficulties in face memory are controlled.