



For Information Contact:

Beth Casteel, 703-907-8640

press@psych.org

Jim Rosack, 703-907-7862

jrosack@psych.org

For Immediate Release:

Release No. 08-015

Normal Effect of Race on Face Perception Explains Apparent Racial Difference Among Patients With Schizophrenia

AJP Study Challenges Earlier Findings of Greater Impairment in Non-Caucasian Patients

ARLINGTON, Va. (March 17, 2007) – Patients with schizophrenia are better able to remember faces and recognize emotional facial expressions when the face represents a person of the same race as the viewer. This effect is well established in healthy people, but it has only now been demonstrated to influence the performance of patients with schizophrenia on cognitive tests using facial images.

Earlier research showed that non-Caucasian patients performed more poorly on these tests than Caucasian patients. However, studies that tested patients from both ethnic groups but only used pictures of Caucasian faces may have biased the findings in favor of the Caucasian group. A new study that included both ethnic groups in the facial images as well as in the test participants has now demonstrated similar “other-race effects” in healthy subjects and patients with schizophrenia.

These findings will be reported online on March 17, 2008, by *The American Journal of Psychiatry (AJP)*, the official journal of the American Psychiatric Association. Amy E. Pinkham, Ph.D., Raquel E. Gur, M.D., Ph.D., and colleagues at the University of Pennsylvania School of Medicine present their study, including sample facial images, in “The Other-Race Effect in Face Processing Among African-American and Caucasian Individuals with Schizophrenia.”

The 270 patients with schizophrenia who participated in the study did show weaker performance compared with 270 healthy subjects on immediate recall of faces, delayed recall of faces, and recognition of emotions. However, both groups showed different levels of accuracy depending on the race of the participant and the race of the facial image being viewed.

On tests of immediate recall, African American participants were more likely to recognize same-race faces than other-race faces. On delayed recall, all participants better recognized faces of their own race as compared to other-race faces. When asked to identify emotions portrayed by facial expressions, African American and Caucasian participants performed similarly when identifying emotions expressed in African American faces, but African American participants—both patients and comparison subjects—performed more poorly in recognizing emotions expressed in Caucasian faces.

“Psychiatrists know that persons who have schizophrenia are very sensitive to others and patients sometimes incorrectly perceive the emotions expressed in another’s face,” commented *AJP* Editor-in-Chief Robert Freedman, M.D. “These misperceptions can even interfere with the doctor-patient relationship. This study makes clear that racial differences can further skew the misperceptions that result from the illness. The study provides scientific evidence of the need to recognize racial diversity in research studies on schizophrenia, as well as in treatment settings, where doctor and patient may have different racial backgrounds.”

- more -

Deficits in recognizing emotion expressed in the faces of other people have been documented in patients with schizophrenia and have been shown to negatively impact patients' social functioning. These problems are associated with abnormal functioning in a complex network of brain regions. One brain area, the fusiform gyrus located in the temporal lobe, is thought to specialize in perception of faces and is sensitive to racial information in healthy individuals. Research has indicated that individuals with schizophrenia demonstrate less activation in the "fusiform face area," compared with healthy subjects.

Likewise, an electro-encephalogram (EEG) measurement that has been shown to be sensitive to facial images is also influenced by the race represented in the image. Research has also demonstrated smaller responses of this EEG component in individuals with schizophrenia while viewing faces compared with healthy subjects.

The similarity of the "other-race effect" in both the patients and the comparison group of healthy subjects in this study also indicates that this aspect of development may be intact in people with schizophrenia. The authors raise the possibility that individuals who later develop schizophrenia may nevertheless have normal developmental experiences with faces and normal development of related neural mechanisms. Since neural changes in early life have been implicated in schizophrenia, findings of typical cross-racial effects help focus research.

"These findings highlight the need for more research on face and emotion processing in individuals who are at risk for schizophrenia but are not yet ill. This work may provide valuable information about how the disorder manifests throughout development, which would have strong implications for both early detection and intervention strategies," said lead author Amy Pinkham, Ph.D.

The study was supported by the National Institute of Mental Health and the University of Pennsylvania. Other funding the authors may have received is reported in the article itself.

Reference:

Pinkham AE, Sasson NJ, Calkins ME, Richard J, Hughett P, Gur RE, Gur RC: The Other-Race Effect in Face Processing Among African American and Caucasian Individuals With Schizophrenia. *Am J Psychiatry* (published online March 15, 2008; doi: 10.1176/appi.ajp.2007.07101604)

Note to Editors:

For more information about the *American Journal of Psychiatry*, including embargoed copies of journal articles, contact Jim Rosack at 703-907-7862 / jrosack@psych.org or the APA Office of Communications and Public Affairs at 703-907-8640 / press@psych.org. To sign up to receive eTOCs and other email alerts about *AJP*, visit <http://ajp.psychiatryonline.org/subscriptions/etoc.dtl>.

About the American Journal of Psychiatry:

The *American Journal of Psychiatry*, the official journal of the American Psychiatric Association (APA), publishes a monthly issue with scientific articles submitted by psychiatrists and other scientists worldwide. The peer review and editing process is conducted independently of any other APA component. Therefore, statements in this press release or the articles in the Journal are not official policy statements of the APA. The Journal's editorial policies conform to the Uniform Requirements of the International Committee of Medical Journal Editors, of which it is a member.

AJP in Advance is a regular online feature within which original research articles accepted for publication in The *American Journal of Psychiatry* are posted ahead of their appearance in print. *AJP in Advance* articles have been peer reviewed, copyedited, and approved by authors. Articles in *AJP in Advance* may be cited by using the date they were posted online and their unique digital object identifier (DOI).

For further information about the Journal visit www.ajp.psychiatryonline.org.

About the American Psychiatric Association:

The American Psychiatric Association is a national medical specialty society whose more than 38,000 physician members specialize in diagnosis, treatment, prevention and research of mental illnesses including substance use disorders. Visit the APA at www.psych.org and www.HealthyMinds.org.