To better understand schizophrenia, a University of Missouri-Columbia psychology researcher simulated one of its more common symptoms - the inability to speak clearly or respond to questions in a precise manner - in people who don't have the illness.

"This study is about working with people who are not schizophrenic and observing whether, under experimental conditions, we could make them act like people with schizophrenia," said John Kerns, assistant professor of clinical psychology in the College of Arts and Science. "In the lab, we challenged their working memory ability as they spoke and simulated deficits found within people with schizophrenia."

He discovered that communication disturbances, or poor communication skills, occur - even in healthy people - when rigorous demands are placed on working memory, which is the brain's ability to maintain information. The study also revealed that an even greater degree of speech disorganization happens when other mental processing requirements are combined with working memory stress.

Findings from this study are consistent with a recent experiment related to the illness. In May, Kerns established a link between poor communication skills and working memory in people with schizophrenia. However, no causation was established because the study was correlational and working memory ability or level of symptoms could not be experimentally manipulated.

"It's two ways of reaching the same conclusion," he said. "In the study with patients, we find that working memory correlates with disorganized speech. With healthy people, working memory manipulation causes an increase in disorganized speech."