SPEAKER NOTES

Current Research on Emotions and Mental Health

Summarized by Thomas T. Thomas

ANN KRING, PHD

Ann Kring, PhD, is a professor and chair of the Department of Psychology at the University of California, Berkeley, and a member of its Institute for Personality and Social Research. She received a BS in psychology from Ball State University and her MA and PhD in clinical psychology from the State University of New York at Stony Brook. Dr. Kring is past president of the Society for Research in Psychopathology and president-elect of the Society for Affective Science. She has received many awards for her research work, is the author of eight books and several scholarly papers, and has served on the editorial boards of top journals in the field.

Her current research focus is on emotion and mental health, with a specific interest in the emotional features of schizophrenia, including the negative symptoms, decision making, and the linkage between social life, cognition, and emotion. She also studies the ways in which people differ from one another in emotion and expressive behavior and the linkages between social context and emotion.[1]

To start, Dr. Kring identified symptoms of schizophrenia. Positive symptoms—not a value judgment but an excess of something other people don't usually have—are hallucinations and delusions, as well as disorganized thinking and behavior. Negative symptoms include blunted affect (lack of visible emotion), anhedonia (lack of pleasure), avolition (lack of motivation), asociality (lack of engagement), and alogia (lack of speech). "We need better assessments and treatments for the negative symptoms," she said, "which are the hardest to treat." She added that current medications don't do much for these symptoms.

Her work on emotion has dealt mostly with blunted affect and anhedonia. "These symptoms represent difficulty in feeling and expressing emotion," she said.

Many families with a mentally ill relative can attest that it's difficult to engage and interact with someone who does not show emotion. That's because we use facial expressions and gestures in talking with people to know when we're connecting with them. A person who shows no emotion, has poor eye contact, and speaks in a monotone—all signs of blunted affect—seems difficult to reach.

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[1] To follow Dr. Kring's research work, see http://socrates.berkeley.edu/~akring/.
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Anhedonia, no longer enjoying things that once gave a person pleasure, appears to lead to reduced willingness on the person's part to engage in activities and try new things.

In researching these emotions, Dr. Kring and her team brought people both with and without schizophrenia into the lab, showed them film clips of funny things like comic movie scenes and disgusting or fear-inducing things like dental procedures, and then videoed their reactions. The team also attached electrodes to their cheekbones and brows to get minute measurements of the nerves and muscles that create smiles and frowns. And they measured physiological effects like heart rate and skin response, as well as performing brain studies. Outside the lab, subjects were issued pagers or smartphones and contacted irregularly to find out what they were feeling right at the moment and to record their level of happiness or sadness on a five-point scale.

In four separate studies of outward expression, people with schizophrenia watching the film clips registered fewer expressions than the general population. But when asked what they were feeling at the time, people with schizophrenia said they were experiencing strong feelings, particularly negative emotions like sadness, disgust, and fear.

"We have long assumed people who don't show emotion are experiencing an emotional void," she said. "But that is not the case. If we use facial expression to judge response in other people, we may be wrong about how they are feeling."

These findings raise a paradox, Dr. Kring said. If someone says they feel happy even when they don't show it outwardly, why don't they pursue the things that make them happy? To understand the answer, she made a distinction between "anticipatory pleasure"—or looking forward to something in the future—and "consummatory pleasure"—or savoring it in the moment.

In the studies, when people with schizophrenia were presented with a pleasurable experience "in the moment" they felt no deficit. But anticipation was a problem. When asked how much they would enjoy something, people with schizophrenia did not predict as much pleasure as those without the illness. This suggests that people with lowered anticipation will be less likely to go and do something.

Another way to look at this, Dr. Kring said, is that people with schizophrenia had an anticipatory reaction that was about equal to their consummatory experience; so their prediction of the future was accurate. People without the illness often overestimate how good something will be in the future and then have a lower actual experience. This correlates with findings from psychology and the social sciences, that increased expectation of a positive result is a survival mechanism. It drives people toward pursuing a goal and compels them to act, while negative expectations about how bad things might be warn people off trying something dangerous. But Dr. Kring noted her team has not fully studied negative expectations among people with schizophrenia. She also noted that people suffering from delusions may have heightened anticipations, in common with bipolar disorder and mania.

The brain studies Dr. Kring's team performed used functional MRI scans, measuring blood flow in the brain to show the firing of neurons in the amygdala and in areas associated with emotion and feelings. The team showed each subject a picture for five seconds of something either pleasant, like puppies, or unsettling, like

a dental procedure. Scans taken in the moment of experiencing the picture indicated no differences between people with and without the illness, suggesting they were feeling the same things. After a 12.5-second lapse, however, the brains of people with schizophrenia were no longer activated, while those without the illness remained active with the emotion. "This suggests that, for people with schizophrenia, it's 'out of sight, out of mind,' " Dr. Kring said. "Imagining the future and holding onto your feelings happens inside your head."

The emotional symptoms of schizophrenia are harder to treat, she said, and current medications don't make a dent in them. One of her team's goals is an emotional rating scale for assessment interviews. They are also working on possible treatments.

One promising approach is a meditation-based treatment. In one of their studies, 31 people, all in their twenties, met in a group once a week for six weeks and practiced meditating for ninety minutes. Their focus was on "loving kindness," where one tries to experience positive feelings toward oneself and others. Measures taken before and after the sessions showed that subjects' anhedonia and blunted affect were reduced, and feelings of pleasure and savoring were increased. Some of these measures lasted as long as three months. Dr. Kring said six weeks were not long enough to achieve a sustained effect, and the subjects would need booster sessions. Also, the test should now be run with a control group.

Meditation is not the only way to treat these symptoms, she said, and current work with cognitive behavioral therapy (CBT), especially in the United Kingdom, is making progress. "These treatments show that schizophrenia is *not* a neurodegenerative disease, like Alzheimer's and Parkinson's."

What can families do with this information? First, don't assume because a relative doesn't show emotion that he or she is not feeling things. Expression does not equal feelings. Second, understand that people with schizophrenia have trouble looking forward, and you can provide them with a positive "scaffolding" to understand and anticipate an event. Third, you can help the person savor an event and their feelings during it by having conversations about feelings and providing language to talk about them.

At the end of her comments, Dr. Kring introduced Debra Wilson, a filmmaker working on a documentary called *A State of Mind*. It's based on two of the team's schizophrenic subjects who have found each other and are making a life for themselves in the Bay Area. She showed an eight-minute sample cut from the film. At the end, Dr. Kring said, "You are living this life with your relatives."

Q. What about using Acceptance and Commitment Therapy (ACT) to treat schizophrenia?

This therapy is generally used for treating depression by accepting your feelings without judgment and then committing to goals. It might apply to some of the delusions and hallucinations of schizophrenia, like hearing voices, in terms of not judging the truth of beliefs, because you can't talk people out of what they believe.