Department of Psychiatry
Eleventh Annual Research Day

June 2, 2011
Giving Back to Their Communities:
Peer Education as Civic Engagement for Depressed Elders of Color

Background
Research suggests that individuals who have personal experience with the mental health treatment system gain unique and potentially valuable insights from their treatment experiences. By sharing these experiences and practical skills learned during their own recovery, Peer Educators (PEs) can set up positive role models of mental health consumers. Peer Educators (PEs) can help mitigate the stigma of mental illness, decrease the fear of entering a state of mental distress, and enable individuals to take steps to prevent their own mental health issues. However, little research has examined the impact of participating in these activities on the PEs themselves.

The Study
The study was conducted by a team of researchers working on the Peer Educator Engagement to assess the potential of their educational and support programs on mental health awareness. The study was conducted in two phases: an initial training program and a follow-up assessment phase. The study involved a total of 50 participants, with 25 participants in each phase.

Results
Overview
Respondents in this study identified clear benefits they received as a result of their involvement in the Peer Educator program and identified several changes in the way they think about mental health subsequent to their work as a Peer Educator.

Impact of the Peer Educator Program
- All respondents (100% of participants) responded 'very true' that they feel that their work with the peers had a positive impact.
- 83.5% of respondents indicated 'very true' and 16.7% 'somewhat true' that they are more likely to volunteer in the future.
- 67.7% of participants responded 'very true' and 33.3% 'somewhat true' that they have brought resources, information, and new skills back to family and friends.

Impact on the Peer Educators Themselves
- 83.5% of participants responded 'very true' and 16.7% 'somewhat true' that they feel better about themselves, their involvement with the project.
- 67.7% of participants responded 'very true' and 33.3% 'somewhat true' that they have increased their circle of friends and acquaintances.
- 67.7% responded 'very true' and 33.3% 'somewhat true' that they feel their life has improved because of their involvement with the project.

Impact on Perceptions of the Mental Health System
- 83.5% of participants responded 'very true' and 16.7% 'somewhat true' that they would be more likely to seek professional mental health treatment if they became depressed.
- 100% responded very true that:
  - They are more positive about seeking mental health treatment.
  - They are more interested in learning about mental health and their participation in the Peer Educator Project has changed their outlook about mental health treatment for the positive.
Effects of early life experience on stress-related neural circuitry.

Goal:
- Stress-related neural circuitry
- Early life experience
- Individual differences in stress reactivity

Methods:
- Distilled Toxic Experiences Questionnaire (CTQ)
- ADHD Rating Scale (DSM-IV)
- Identifies the cortisol that differs in spatial location

Results:
- Consistent control
- Inconsistent control

Summary and Conclusion:
- Brain activity within ACC
- Cardiac reactivity
- Cortisol and physical stress
- Anxiety and psychosocial stressors, which may contribute to altered cardiovascular function.
Marked deficit of GAD67 protein levels in parvalbumin-containing axon terminals in the prefrontal cortex of subjects with schizophrenia

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Methods and Results

- Decreased GAD67 protein levels in the prefrontal cortex
- Correlation with clinical symptoms
- Implications for schizophrenia treatment

Immunocytochemistry and Slicing

- Localization of GAD67 protein in axon terminals
- Analysis of arbors and terminal density

Data Analysis

- Statistical comparisons using ANOVA
- Graphs showing protein levels across different conditions

Conclusions

- GAD67 deficit linked to schizophrenia pathology
- Potential therapeutic targets for improved treatment

Microscopy

- High-resolution images of axon terminal morphology
- Comparative analysis with control groups

Image Processing

- Quantification of GAD67 expression
- Visualization of axonal distribution

Functional role of AMPA and NMDA receptors in neurons: NMDAR hypofunction hypothesis

NMDA antagonist administration recapitulates core features of schizophrenia

Coyla, Tsai, & Ghf, Am J Psychiatry 2003
Kryskel, Akaral, & Moghadam, Arch Gen Psychiatry 2002

NMDA antagonists produce disinhibition, suggesting NMDA is critical for GABA neuron activation

Coyla, Brodies, Pharmacol 2004
Lewis & Moghadam, Arch Neural 2003
Homayoun & Moghadam, J Neural 2007