Dr. Neumann’s research is aimed at better understanding why people with TBI have trouble recognizing people’s emotions and how to treat these problems. She is currently involved in a multisite study testing different treatment approaches to teach people with TBI to recognize how others are feeling.

The concept that some people with TBI misinterpret people’s emotions has recently led Dr. Neumann to wonder if people with TBI might also be misinterpreting other people’s behavior. For example, the wife of a person with TBI goes out with her girlfriends for the evening leaving her husband home alone. The husband might misinterpret his wife’s behavior as mean because she is trying to get away from him. This causes him to feel angry, when in actuality, it was her friend’s birthday.

The two women in my office were clearly distraught. They were the mother and wife of a man with a traumatic brain injury (TBI). They were there to get him into a research study on treating emotional problems after TBI.

I asked, “What made you respond to the ad for this study?” They told me that despite his remarkable physical and cognitive improvements, he was still a different person even though it had been years since his injury. He used to be so happy-go-lucky, but now every trivial occurrence triggered an unexpected, angry outburst.

The wife further explained she no longer felt “connected” with her husband. Prior to the injury, which was just a few months after they were married, he was a compassionate person always in tune with her emotions. Now he was oblivious to her needs; never comforting her in times of sadness or worry, unresponsive to her frustrations, and never participating in her joys — not even when their first child was born.”

Why was this man overemotional one minute and underemotional the next? These emotional and behavioral problems are unfortunately a common story after TBI and have become the focus of Dr. Dawn Neumann’s research, with her long-term goal of improving relationships and quality of life for people with TBI and their families. Nationally the divorce rate for couples where TBI has occurred is upwards of 77%.

It is likely that there are several explanations for why someone with a TBI might have unexpected or “inappropriate” emotional responses. Much of Dr. Neumann’s research focuses on how people with TBI interpret other people’s emotions.

People do not usually tell us what they are feeling. Instead we interpret emotions from facial expressions, tone of voice, body language, and the context of a situation. Studies suggest that approximately 30% of people with a TBI have trouble “reading” peoples’ emotions. They may often misinterpret someone’s feelings of sadness or fear for anger.

Consequently the person with a TBI would become defensive and confrontational instead of supportive, which would appear “inappropriate” to the person who is sad or fearful.

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Dr. Neumann was just recently awarded grants by the Indiana Spinal Cord and Brain Injury Research Fund, and a prestigious Switzer Fellowship from the National Institute on Disability and Rehabilitation Research to further investigate these questions.

Dawn Neumann PhD is currently a Visiting Professor in the IU School of Medicine and is a Research Associate at RHI.
Awards:
Congratulations to Dawn Neumann, PhD who received a Mary Switzer Research Fellowship from the National Institute of Disability and Rehabilitation Research (NIDRR). These fellowships are “awarded to help the nation build future disability and rehabilitation research capacity” and will cover the better part of Dr. Neumann’s salary for the next year.

Publications:

Presentations:
- At the 2001 Mid-Year meeting of the International Neuropsychological Society, Auckland, New Zealand, July 6-9, 2011:
- At the 8th Conference of the Neuropsychological Rehabilitation Special Interest Group of the World Federation for NeuroRehabilitation, Rotorua, New Zealand, July 11-12, 2011:
  Malec JF, Eicher V, Murphy MP, Murphy TF. Progress assessed with the Mayo-Portland Adaptability Inventory through the client outcome system for 604 participants in four types of postacute brain injury rehabilitation programs.
  Trexler LE, Haskins EC, Eberle RD. Workshop on the evidence-based cognitive rehabilitation manual for therapists.
  Trexler LE. System coordination and resource facilitation to improve vocational outcome after brain injury.
  Malec JF, Moessner AM. Embrace the chaos: Surviving and thriving as a brain rehabilitation provider.

Other Presentations: