Tri-County Batterers Intervention Providers Network Meeting: February 27, 2001
Present: Curt St. Dennis (Men's Resource Center and Multnomah County Community Justice), Michael Davis (Changepoint), Margaret Langslet (PSU), Chris Huffine (Men's Resource Center), Songcha Bowman (Private Practice and Men's Resource Center), Barbara Lamandri (OHSU), Devarshi Bajpai (Changepoint), Marc Hess (Sage and Multnomah County Community Justice)

Minutes by Margaret Langslet and edited by Chris Huffine

Topic: Barbara Lamandri speaking about Psychopharmacology and Violence Prevention

-Barbara Limandri, DNSc is a professor in the School of Nursing at Oregon Health Sciences University. In addition to the teaching and work she does at OHSU she also works as a Mental Health Nurse Practitioner at Hamilton House Counseling Center. She is also very knowledgeable about domestic violence and has been active in the DV field for many years, including educating nurses about DV.

-Editor's note: Barbara Lamandri presented extensive information on neuroanatomy, neurotransmitters, and various psychopharmacological agents—far more information than can be adequately summarized here. Below are some, but not all of the points made. All who attended agreed that it was a very informative, exciting, and enlightening presentation on the advances of psychopharmacology in the past decade and its relevance to abusive men.

-In looking at a patient, one should take biology, psychology and sociology into consideration. This is a holistic view of treatment. The 1990's were declared the decade of the brain and sparked extensive research on the brain. Approximately 90% of all brain research ever done has been done in the past seven years. Many people are in good therapy for years, but are still distressed. Once these patients get on medications, they are more likely to start using the therapy they've learned. Medication fits into, not overrides, psychotherapy.

-When looking at the neuroanatomy of battering, it's been found that the hypothalamus, the limbic system and the frontal cortex are all involved. Anger is an emotion or feeling, while aggression is the behavior kicked in by the brain. The limbic system, including the amygdala and the temporal cortex relate to the feeling of anger. How the individual expresses the anger is determined by the hypothalamus and frontal cortex. The hypothalamus triggers the pituitary gland which triggers the endocrine system, which in turn triggers the adrenal cortex. When an individual is angry, they have increased cortisol, which "shrinks" the hippocampus, which can lead to increased concentration and a narrowing of focus, which can manifest as preoccupation.

-Are there other ways this system could be triggered beside an emotional trigger? Yes,

steroids can be a trigger because they affect the pituitary gland. However, they trigger the system in the opposite direction, starting with the testes, which leads to the endocrine system, which leads to the pituitary gland.

-When a clinician sees a depressed client, they should always check their thyroid first. That may be playing a significant role in their depression. Another medical condition that can have significant consequences on a person's emotional function is diabetes which can cause depressive symptoms, as well as autoimmune diseases. An over or under functioning thyroid and diabetes can contribute to the functioning of the hypothalamus, pituitary, and endocrine systems which can have an impact on a person's emotional/behavioral functioning.

-Another structure that triggers aggression is not enough serotonin and increased dopamine. This causes obsessive-compulsive behaviors, but the frontal lobe can override it. Aggression, anxiety, impulsivity, and aggression all appear to be a part of a continuum of responses related to these systems. Most of the research that has been done has been done on men. There is not much brain research on women because of the possibility of pregnancy. Also the hormonal fluctuations of a woman's menstrual cycle can also complicate things. (Not to mention plain old sexism of thinking that what's true for men will be true for women as well.)

-During the time before a woman's period, estrogen is down and depression is up. This combination can cause anger and depression.

-How does head trauma affect this? Head trauma may cause neurological soft signs that may not be seen on a CAT scan and they don't know about the physiological reactions. Neurological soft signs can cause nerves to fire irregularly and randomly. If this happens in the limbic system irregular emotion will result. If it occurs in the hypothalamus, it causes depression. This may happen even a year after the head injury. There are problems especially in patients with early head trauma. The brain doesn't stop developing until a person is sixteen to seventeen years old and physical or emotional trauma can affect it. In people with early trauma, more norepinephrine causes them to respond more intensely, be hyper-reactive and they have intrusive memories. They need serotonin to help them.

-You can think of norepinephrine as the "gas pedal"—it releases adrenaline, among others, and leads the body to be in a more reactive/aroused state. Serotonin serves as the "brake", to calm the body down and return it (and the brain) to a more relaxed/resting state. When someone has low serotonin, it is also common for them to be depressed. The Serotonin Reuptake Inhibitors (SRIs) including Prozac, Paxil, and Zoloft help lift depression by increasing the level of serotonin in the brain. GABA slows and regulates the firing of the neurons, which can help stop seizures. Valium, Topamax, and Tegretol all help regulate neuron firing.

-Dopamine affects the lateral hypothalamus, which is the reward center and gives a sense of well being. Many things can affect this area including heroin, opiates, chocolate and nicotine. Carbohydrates are a weak alternative to those, which also has some impact. Wellbutrin, or Zyban, affects dopamine and norepinephrine. Medications that are serotonin reuptake inhibitors reduce anxiety, depression and aggression. Ideally dopamine and serotonin levels are balanced, because too much of either is a bad thing. These medications aren't a cure, though, because other neurotransmitters influence these symptoms.

-Beta-blockers such as Inderal and Atenolol are short acting and work on the autonomic system, not the brain. They are especially good for reducing the common autonomic response caused by the release of adrenaline. They would be especially good for explosive behavior where a person feels very agitated since they would reduce that sense of agitation.

-Any good, competent prescriber should take the time to explain to patients what the medication will do and how it works. Ms. Limandri typically gives every patient a diagram of the brain to show where exactly the medication is affecting the brain.

-Ms. Limandri agreed to provide a list of prescribers who are both knowledgeable about these recent psychopharmacological developments as well as domestic violence issues.

-For more information on the connection between brain chemistry and emotional/ behavioral expression the following books are recommended reading:
Anger, the Misunderstood Emotion by Carol Tavris
The Biology of Violence by Debra Niehoff
The Emotional Brain by Joseph LeDoux

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