

The Body and Mind Connection: Linking Behavioral Health to Physical Health

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Dualism

- Plato held that the soul is separate from the body, and capable of independent existence.
- DesCartes promoted the idea of a distinction between mind and matter
 - Although they were connected, either one could exist without the other
 - Mind and Matter causally interact, matter can cause change in mind, and mind can cause change in matter, but the mechanism of interaction was not described.
- Other cultures that do not derive from this Greco-Roman, Western tradition do not endorse a dichotomy of mind and body.


Connection?

- What and where is your body?
 - Tangible, measurable tissue inside your skin
- What and where is your mind?
 - Intangible, abstract construct
 - Thoughts, emotions, memories, reasoning, personality, intelligence, “the agency or part in a human or other conscious being that reason, understand, wills, perceives, experiences emotions, etc. ... the totality of conscious and unconscious mental processes and activities of the organism.” – Random House College Dictionary.

Processes

- What is emotion?
- What is thought?
- What is memory?
- What is personality?
- What is reasoning?
- What and where is the process of emotion, thought, memory, personality, reasoning?
 - Biochemical mechanism in the brain

Inseparable

- Mind is a construct to describe the processes of the brain.
 - Brain is part of the body
 - Mind and Body have never been separate, except in the way that we think about them
 - Let's examine how this construct has impacted healthcare
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Separate yet connected...

- Separate sets of diagnostic schemas, ICD and DSM
- Separate sets of caregivers, physicians and mental health workers
- Separate sets of care facilities, hospitals and clinics for health and mental health
- Separate sets of payment systems for services depending on diagnosis and provider
- Separate agencies to fund research, NIH & NIMH; educate and train clinicians
- Stigma, tension, us vs. them

Examples

- Identification of “anxiety”
 - How do you know that you are anxious?
 - Treatment: medication or relaxation?
- “Disease” model of addiction.
 - How do we define dependence?
 - Where do we treat addiction?
- Dementia
 - The brain no longer functions properly, what happens to mind?
 - Where and how do we treat dementia?

Inter-relationship: process and function

- Can the functions of one body organ affect the functions of another?
- Isn't this a silly question?
- Of course the processes and functions of the brain affect other organs, functions, and processes within the body. How could it be otherwise?



Selected studies

- **Depressive symptoms and abdominal obesity in older adults** – Vogelzangs et al., *Arch Gen Psychiatry*. 2008;65(12):1386-1393.
 - Depressive symptoms result in increasing abdominal size and visceral fat accumulation, contributing to obesity.
 - There appears to be a pathophysiological mechanism linking depression and visceral fat accumulation.
 - This may explain why depression increases risk of diabetes and cardiovascular disease.

Selected Studies

- Depression is linked with coronary disease
 - Ford, Mead, Chang, Levine, & Klag, *Circulation*, (1994); 90 1-614
 - Male medical students followed for 35 years, those who reported depressive symptoms had a higher risk of myocardial infarction.
 - The first report of depression preceded cardiac disease by about 10 years.

Selected studies

➤ Stress and heart disease

- Stress has direct effects on the development and course of coronary heart disease — Smith & Ruiz, *Journal of Consulting and Clinical Psychology* 2002, 70(3) 548-568.
- Stress and negative emotions increase heart rate and contraction force — Brownley, Hurwitz, & Schneiderman, Cardiovascular psychophysiology, *Handbook of psychophysiology*, 2nd ed. pp.224-264.
- Stress affects factors related to blood coagulation and clots — Von Kanel, Mills, Fainman, & Dimsdale, *Psychosomatic Medicine* 2001, 63, 531-544

Selected Studies

- Adults with type-2 diabetes show greater cognitive decline in aging in two areas – Dixon, *Neuropsychology*, 2009, 23(1).
 - Older adults with and without type-2 diabetes took tests of episodic memory, semantic memory, verbal fluency, executive functioning and neurocognitive processing speed.
 - Those with diabetes performed worse in areas of executive functioning and neurocognitive speed than those who did not have diabetes.

Selected Studies

- **Benefits of Psychological Preparation for Surgery: A Meta-Analysis** — Johnston, & Vogele, *Annals of Behavioral Medicine* (1993) 15(4) 245-256.
 - Surgical patients who receive psychological preparation show better outcomes of surgery in less negative affect, pain medication, length of hospital stay, and more behavioral and clinical indicators of recovery, physiological indices, and satisfaction

Selected Studies

- Living with someone who has mental illness affects the health and functioning of household members — Gallagher & Mechanic, *Social Science & Medicine* (1996) 42(12) 1591-1701
 - Sharing a household with a person who has a mental illness is associated with poorer self-reported physical health, increased risk of activity limitation, and increased number of hospitalizations and physician visits.


Snapshots

- “Newborn reactions can predict depression and anxiety, ... a baby’s temperament – reliably discernable at 4 months of age – predicts the structural development of the anterior prefrontal cortex, the brain area heavily involved in emotional response and control.” Schwartz, et al., (APA Monitor, Feb. 2009)
- “Workers with managers who were inconsiderate, opaque, uncommunicative and poor advocates were about 60 percent more likely to suffer a heart attack or other life-threatening cardiac condition. By contrast, employees with good managers were roughly 40 percent less likely to suffer heart emergencies.” Nyberg, *ibid*
- “The Atkins diet and other low-carb weight-loss plans may hamper thinking and memory” – Taylor, *ibid*
- “Poor mental health may boost asthma risk.” *Chest*, 134(6).
- “Depression in women linked to heart disease, ... Doctors have long known that depression is common after a heart attack or stroke, and worsens those people’s outcomes. Monday, Columbia University researchers reported new evidence that depression can lead to heart disease in the first place” AZ Republic, 3/10/09

Snapshots

- A positive outlook can extend life – Anderson & Anderson, 2003. (APA website)
- Work related stress can double the risk of dying from heart disease – British Medical Journal, 2002, ibid
- Stress is linked to the six leading causes of death, heart disease, cancer, lung ailments, accidents, cirrhosis of the liver and suicide – Miller & Smith, ibid
- People with high levels of anxiety can have 2 to 7 times the risk of heart disease – Anderson & Anderson, 2003, ibid
- Anxiety-related disorders cost the U.S. \$42 billion per year in work-related medical losses – NIMH, ibid
- Stress reduces immune response and increases susceptibility to infectious disease – Glaser, Rabin, Chesney, Cohen & Natelson, JAMA (June 1999) 281 2268-2270

Connected or Inseparable?

- So professionals and the public understand that there is a link between body and mind, physical health and behavioral health.
 - But we persist in thinking of mind and body as separate, connected entities, even though this false dichotomy poses many problems.
 - Our prevention and treatment methods are derived from the way we think about this.
 - Can we change the concept?
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What to do?

Health Care for the Whole Person Collaborative (26 partners, including American Public Health Association) says:

- “The dominant conceptual model of health in the United States, and as a result, the U.S. health care system, artificially separates the mind and the body. This separation has a negative impact on health care access, health care costs, and quality of care with a disproportionate share of the burden falling on women, racial and ethnic minorities, and immigrant populations. Furthermore, this separation has a negative impact on public health as opportunities for prevention, education, and early intervention are denied. ... There is abundant scientific evidence that behavioral, psychological, spiritual and psychosocial factors are significant determinants of health status, healing, and health care utilization for all ages, including older adults.

- www.apa.org/practice/hcwp_statement.html

They go on to say...

- “The promise of an integrated primary health care system and multidimensional approach to public health ...
 - reduces the burden of illness and injury by an evidence-based emphasis on healthy behavior and psychological health in addition to physical health;
 - Reduces the incidence of untreated mental health problems;
 - Contributes to more effective use of resources and helps reduce the cost of health care with targeted, focused psychological health services in addition to physical health services;
 - Promotes healthy lifestyles and disease prevention”

Further...

- “A strong integrated health care system and approach to public health in both urban and rural areas are the central (and missing) pieces of the health care puzzle.”
- “Integrated care is health care that addresses physical, mental, and behavioral health issues at the same time and is optimally provided by a multidisciplinary team of providers.”

And conclude...

- “Health, public health, and health care groups, believing a healthier population and more rational health care system will result, affirm our intention to work together toward the development and application of a fully integrated health care and public health system.”

BOmindDY?

- What and where is your body?
- What and where is your mind?
- The next time you feel anxious or call up a memory, think about whether that's in your body, your mind, or your BOmindDY?

