**Colleague Matthew Q response to Yolande H post to Week 2 discussion 1**

Yolande,

I also was considering doing my assignment on the fMRI also. I know it is considered to be one of the best brain imaging studies on neuropsychiatric. I choose to do mine on the Single Photon Emission Computed Tomography (SPECT) scan after reading the book Change Your Brain, written by clinical psychiatrist Daniel G. Amen MD (Amen, 2016). The book describes how Dr. Amen is able to diagnose psychiatric illnesses precisely using the SPECT scan.  According to Dr. Amen:

In 2012, we published a study in which we asked 7 psychiatrists to evaluate 109 consecutive charts without brain SPECT scans and then with scans. In 8 times out of 10, adding the scan into the review changed the diagnosis and/or treatment. In over 1 in 5 cases, the scan revealed an unexpected brain injury, and in another 1 in 5 cases, it revealed unexpected toxicity. And 60% of the time, it changed the medications or supplements recommended, (Amen Clinics, 2015).

My understanding of the fMRI is:

Currently, the brain imaging method with the best spatial resolution is functional MRI(fMRI). Engineers have devised modifications to existing MRI scanners and their software that permit the devices to acquire images that indicate regional metabolism. Brain activity is measured indirectly, by detecting levels of oxygen in the brain’s blood vessels. Increased activity of a brain region stimulates blood flow to that region, which increases the local blood-oxygen level. The formal name of this type of imaging is *BOLD:* blood oxygen level-dependent signal. Functional MRI scans have a higher resolution than PET scans do.

I would like to know which one of the two has a greater ability to diagnose specific psychiatric disorders? What do you think?

Matthew

References

Amen Clinics. (2015). Amenclinics.Com. https://www.amenclinics.com/approach/why-spect/

Carlson, N. R., & Birkett, M. A. (2017). Physiology of behavior (12th ed.) [Custom edition]. Retrieved from https://content.ashford.edu