

“Sleep, Dreams and PTSD: Opening a Backdoor”

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1. Introduction

(D) “So, you got all that information off your Apple Watch?”

(P) “Yes, Sir. And I’ve been recording my sleep activity for several months now.”

(D) “Do you think there is a possibility we can track your blackouts by looking at your sleep data from the night before?”

(P) “What do you mean?”

(D) “That with a poor night’s sleep there is a high probability that you will have a blackout the next day.”

(P) “I never thought about my blackouts having anything to do with my sleep habits.”

(D) “I’m guessing that there is a one-to-one correlation between a lack of good sleep, and blackouts the next day. Should we start tracking this?”

(P) “Okay, I mean my watch gives me a lot of data so why not?”

(D) “If we can prove this, then I think we have stumbled on something very important and very useful in your treatment.”

With this doctor-patient exchange I came across the idea/conception/insight that it was possible to predict when my patient was going to experience a blackout, some of which were very dangerous for her. At first this appeared to be a wild and crazy idea.

But as we continued to work with this hypothesis, the evidence became overwhelming. There was almost an exact one-to-one correlation between her not sleeping well, as tracked very accurately on her Apple Watch, and her blackout periods. Once I established this connection I began to ask other patients, who also luckily had Apple Watches, to check this out. To a patient, this proved to be true. What’s going on here? And interestingly enough, not a single one of my patients balked at this idea. Instead, they jumped right on it.

2. Listening to the Brain

Several years ago, I came across the conception that it was very possible to “listen to the brain.” because the human mind is the subjective experience of what is happening in the brain. My psychoanalytic training had prepared me well for the experience of being with a patient and listening to their experiences. And I learned a lot about how patients were “experiencing” their brain

injuries. One thing led to another, and in August of 2023 I published “The Complex Architecture and Healing of Traumatic Brain Injuries: Listening to the Brain (Cambridge Scholars Publishing). During my learning curve about healing brain injuries, I came to realize that in order to help persons with trauma to the brain, the doctor had to enter the patient’s experience, and not remain outside of their experiences (as with drugs, techniques to address brain injuries, and Cognitive-Behavioral Therapies). This is no easy task, because trauma to the brain affects a person on 4 different levels: physical, cognitive decline, social and emotional, and sleep disturbances (speaking of sleep and Apple Watches) [1]. Injuries to the brain are subtle and often not visible to the patient or the people around them. Demands on the brain of any kind, take away from the healing process. This is a huge problem because a person experiencing a brain injury can’t really rest their brain the way a person can when they need to heal a broken arm by placing it in a cast, and not using it while the arm heals. Healing a brain injury has no such luxury.

3. PTSD and Complex- PTSD

So, what does all of this have to do with “dreams and PTSD?” In developing my model of the neurodegenerative progression of trauma to the brain (see Figure 1), I realized that trauma to the brain/mind, including blows to the head, strokes, seizures, infections in the brain, illness and disease in the brain, and major mental illness-schizophrenia and bipolar I & II, all create traumatic experiences for the patient. This led to the realization (see the Brain Line article) that trauma to the brain slows the brain/mind down so that it is “running” like a slow computer. And PTSD speeds up processes in the brain/mind through the release of stress hormones. This is sadly, the “perfect storm” in the brain, and makes patients feel as though they are literally going crazy because they can’t process their normal, everyday experiences.

How do we define PTSD and Complex-PTSD? Here are what I believe are the defining symptoms [2];

Intrusions (re-experiencing the trauma through flashback, nightmares and night terrors).

Persistent Avoidance of persons, places, and things related to trauma or traumas.

Negative Changes in Cognition and Mood (including cognitive decline and increases in depression and anxiety).

Changes in arousal and reactivity (being in a state of hyper-focus all the time.

Dissociation (when the mind leaves the body in order to protect the person from overwhelming feeling states).

In my experience PTSD and C-PTSD can also include an increase in impulsive and aggressive behaviors [3-7].

Looking at another case we can also see the link between sleep disturbances and an increase in medical problems during the day (this patient was already exploring his sleep patterns using his Apple Watch). For him poor sleep equaled more intrusive thoughts during the day that made it even more difficult for him to focus on attending college.

(P) “Doc, sometimes when I wake up, I believe I am still in REM sleep and I’m actually pretty disoriented for at least the next 30 minutes.”

(D) “What exactly are you experiencing during this disorienting period?”

(A long pause. This was a very thoughtful and intelligent patient. But because of his post-concussion syndrome struggles his brain/ mind was always working very slowly.)

(P) “At that point, I believe I have 3 distinct experiences. One, even though I’m a mess in my head, I am also localized to person, time, and place. But beyond this I can’t track anything. Two, everything feels very abstract. Like I’m playing a video game. And three, I actually move into real life although very slowly.”

(D) “Do you think it’s possible that when you wake up in REM sleep it’s because you have not finished processing your dream? The dream remains unresolved and unmetabolized, so it carries forth into your day. And this is why you’re disoriented for a while as you proceed into your day.”

(P) “Sometimes this disoriented feeling will last my whole day.”

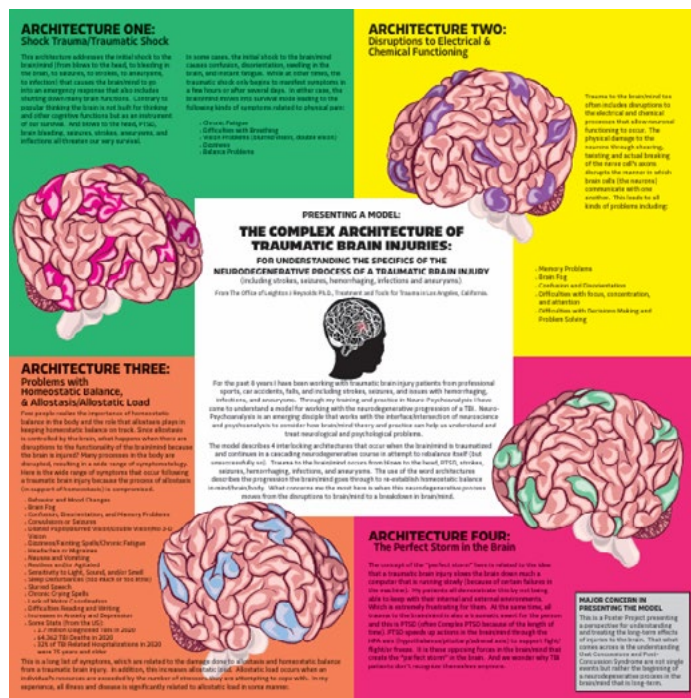
(D) “And do you think this problem has anything to do with not being able to focus during your college classes? Because your brain/mind is still processing dreams from the night before?”

(D) “And if you wake up refreshed, then is it a lot easier to focus in class?”

(P) “Yes, I think that would be true. But I don’t exactly know what to do with this insight?”

Let me step back for a moment and give you some background on this case. Mr. A is another of a line of patients I have been working with who experienced a concussion during elementary school (blacked out for several minutes), but beyond a visit to the ER there was no follow up. Then the usual progression (because concussions in my experience always create a neurodegenerative process in the brain) and he started having difficulties with

concentration and social interaction in high school. Since he was very bright young man, he was able to “think” his way around a lot of the problems his brain was presenting to him. But by the time he was attending college, and under all the pressures of college work, he began to hallucinate because his brain couldn’t cope with all these demands. He withdrew from college at this point, headed home and was placed on medication for his psychosis. However, once again, no attention was paid to his brain, nor his history of having experienced several blows to the head while growing up. Medication did help him some, but he was still struggling with the same problems: physical pain and fatigue, cognitive decline, social withdrawal and emotional dysregulation, and constant disruptions in his sleep schedule. By the time he came to see me, he was attending a community college working his way back to a big university and struggling a lot. He was forced to make many adjustments to his daily routine in an unsuccessful effort to simply cope.



I note that when he began taking Adderall his attention, focus, and concentration improved a lot. However, he found himself coping with too many emotional dysregulated states and stopped the medication. I also note my finding that giving these kinds of medications is not the answer, because trauma to the brain/mind is always pervasive and requires a total immersion approach that does not involve drugs.

By the time the above doctor-patient exchange took place he was back in college where he wanted to be. But he was struggling with the same cognitive decline issues with some encouraging improvements. In “listening to his brain” we got to the above exchange [8]. And again, what does all this have to do with PTSD and healing trauma especially when there is an injured brain/mind involved.

(D) “What about the intrusive thoughts you shared with me last session? Are you still struggling with them?”

(P) “Yes, and you’re right. These intrusive thoughts do drain my energy. Because I constantly must put them in the back of my mind.”

(D) “I believe you’re right in that these internal demands on your brain/mind for having to “cope up” (to use a Filipino expression) are exhausting your energy. No wonder you’re having difficulty concentrating in class. There is no energy left in your brain.

(P) “So, what does all have to do with my sleep patterns?”

(D) “What are your thoughts here?”

(P) “I haven’t really thought about my problems from the standpoint of how I sleep every night, or how I don’t sleep every night, which is too often the case.”

(D) “At this point in our work together, this is what I understand that you are struggling with and that our work together needs to address. Let’s work backwards from your difficulties in the classroom. I believe that your inability to focus effectively in the classroom, including every class you are attending, is directly related to a lack of energy in the brain/mind. Why is this? Because the mitochondria, those little energy factories in the nerve cells, are severely damaged because of the original concussion and the neurodegenerative progression that follows.”

(P) “I don’t understand what the mitochondrial are all about. Little “energy factories?” [9].

(D) “One of the secondary causes of trauma to the brain/mind is the injury that occurs with damage to the mitochondria. Damaging the mitochondria leads to serious problems including oxidative stress and subsequent cell death (apoptosis) and decreased cellular energy production. In turn, these cellular alterations impair neurological functioning across the brain/mind” [9].

(P) “Okay, I follow so far sort of. This is complicated. But then what?”

(D) “It is my hypothesis that the lack of energy in your brain to meet the demands of your being a student in class, listening, taking notes, and asking questions, is related to secondary damage to the mitochondria. When we can work at healing the mitochondrial damage in the brain then sleep will come more easily and you will begin to feel improvements in your ability to concentrate, focus, and attend to your college classes” [10].

(P) “This is a lot to take in”

(D) “Let’s work to figure out if I’m on the right track.”

4. Summary and Conclusion

This article really explores two conclusions regarding PTSD and dreams. Healing trauma is never an easy undertaking because traumatic events become imprinted into the neurological circuitry of the brain. These events are neither easily avoided nor easily treated. By “opening the backdoor” I am referring to exploring what happens during sleep and dreams as a precursor to what happens to the person during their daily routine. And that seemingly impossible problems with brain damaged and highly traumatized persons can be approached by improving their sleep time and opportunities to dream on a consistent basis. This is a backdoor into the healing process of PTSD and C-PTSD, and

physical trauma to the brain/mind.

Both the cases presented here demonstrate how working with a neuro-psychoanalytic approach (brain and mind) opens doors to the healing process. I see this as a backdoor approach because most of medicine does not yet make the connection that unresolved, unmetabolized issues, problems, fears, and decisions are carried over into one’s day creating many problems. As I began to work with more patients around this connection, they were able to adjust their lives to decrease the serious problems they were facing each day. With the first case presented, using her Apple Watch she was able to track her sleep activity and significantly decrease the serious blackout periods she had been experiencing. Unfortunately, because of her lack of money and insurance coverage we were not able to get her an EEG to determine if this was seizure activity or psychogenic blackouts and quite possibly both. But using this approach she was definitely making progress. With the second case presented, tracking his sleep activity using his Apple Watch led to significant improvements in his ability to successfully attend and process his college classes.

This hypothesis needs a lot more attention. But I believe this approach has a tremendous amount of potential for healing trauma. Most of the patients I work with have experienced significant brain trauma through blows to the head, a stroke (the leading cause of death around the world), seizures, brain infections, brain illnesses and disease, and major mental health issues (schizophrenia and manic depression or bipolar is the new diagnostic label), which in my experience creates more problems for the clinician because everyone with a brain injury is also a person who “brings with them” their own history for better or worse. And the clinician needs to work with both. Hence, the neuro-psychoanalytic approach.

I have also noted that particularly Complex-PTSD (long-term) creates changes in the brain, disrupting brain functioning, that need to be addressed as well as the traumatic experiences. This does create a lot more work for the clinician, but in my experience significantly improves the patient’s journey to health.

Finally, in review, these are the areas clinicians need to work with to facilitate the healing processes of trauma [3].

PTSD and C-PTSD affect those parts of the brain responsible for memory and thinking interrupting their proper functioning.

The brains of those affected by PTSD and C-PTSD are hyperreactive to threats of any kind (see the amygdala).

Persons experiencing PTSD or C-PTSD have difficulty regulating the emotional states of particularly anxiety, depression, and anger (see the medial PTC).

Regarding the healing of PTSD and C-PTSD, the stress of trauma combined with the memories of it form significantly strong memories that are difficult to work around.

Persons struggling with PTSD and C-PTSD experience intense flashbacks, anxiety, panic, depression, and fear/terror when these memories are triggered.

Those brain areas affected by PTSD and C-PTSD include the control of memory, reasoning and thought causing a person to experience difficulties remembering events, thinking in general, and learning new information.

PTSD and C-PTSD significantly affect sleep patterns causing ongoing sleep disturbances. And finally, the hypothesis of this article (and the research working on this hypothesis) suggests that working with sleep and dreams to process these factors significantly improves the person's ability to function during their daily lives. This is the backdoor to healing PTSD and C-PTSD.

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