

Music and the Brain

a podcast by Bryan L. Wilson

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May 13th, 2021

Music Therapy and its Effects on the Brain

Whether it's dealing with life changing experiences such as: rehabilitation from a tragic accident, sudden illness, or diagnosis, traditional medicines and conventional practices are good; but they aren't the only option. As an individual who suffered from intermittent explosive disorder, or more commonly known as IED, I used to have trouble controlling my feelings and sorting through my emotions. It was hard for me to explain why I acted out at times, I just couldn't understand, but as I recall one of the few things I found solace in was music. As a result I started wondering and this question came to mind: can music be used in other ways? and if so can it be used as a medical treatment option? I decided to investigate how music is connected to the brain. Specifically, identify what are the psychological and behavioral factors that contribute to this rationale and look into whether when presented, does the presence of music serve as a viable treatment option. After a closer look, I realized there was a strong therapeutic connection between music and the brain, specifically in the effects that music has on the brain.

Taking all this into consideration, it is my belief that the presence of music therapy serves as a tremendous asset in the treatment of the brain by: targeting areas moving us on a subconscious level and stimulating psychological responses. However, just listening to music

and using it as a coping mechanism or crutch, is detrimental to both our overall mental health and ability to function in our environment. In order to effectively implement the use of music as a viable treatment option, it has to be used in conjunction with other therapeutic practices.

Music Therapy is generally defined as: the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship to address behavior, specifically the physical, emotional, cognitive, and social needs of individuals (Davis). After assessing the strengths and needs of each client, the qualified music therapist provides the indicated treatment including creating, singing, moving to, and/or listening to music. Through musical involvement in the therapeutic context, clients' abilities are strengthened and transferred to other areas of their lives, providing an outlet for expression of feelings (American Music Therapy Association).

In a study investigating the correlation between music and brain activity, psychologists Hodges and Wilkins examined the unique qualities of music along with the five neurological and psychological keys on why music moves us (Hodges, 41). Hodges and Wilkins discovered that the presence of music targets “parts of the brain are active during a variety of musical tasks, such as listening to or performing brief excerpts..... and everyone has the possibility of meaningful musical experiences and that those who study music seriously show significant changes in both brain structure and function” (Hodges, 42). By expressing it in this manner, Hodges and Wilkins confirm the process of how the brain’s dynamic interconnectivity and network is affected. By listening to music targeted areas of the brain linking to self-awareness, along with associated personal histories, core emotional memories, and empathy; moving us on a subconscious level. The relationship between music and the brain, especially the interconnectivity of the two, trigger emotional responses. Musician and Doctor Robert Gupta described music therapy, respectively

as “deeply communal” and “empathetic consciousness”, which possess the power compelling us to remember our shared, common humanity (Gupta). How exactly does music trigger an individual’s brain activity subconsciously? The scientific community is not really sure. Music and quite frankly all the various complexities and processes associated with the brain, continue to pass beyond all scientific comprehension.

Research done at The Parish School in Houston, theorized music therapy could help children find their voices and connect with the world around them (Unbabbled). Specifically speaking, it would help children re-engage with both their internal and external environment. While the study was able to confirm this hypothesis, it was also revealed music therapy, specifically singing, helped children with the fluidity of speech triggering areas of the brain known to perform motor function. This new development resulted in “cognitive rehabilitation” [i.e. language development], a by-product of therapeutic practices commonly used in response to mild and severe cognitive impairment (O’Sullivan, 285). Regardless, as humans, instinctively know and have more or less experienced the phenomena associated with music. Just by listening to, it “has the capacity to tap into how we process aesthetic experiences, a central aspect of our humanity, to reveal, explore, and share what it is that makes us both corporately the same and yet individually unique” (Hodges, 46).

So what does it really mean to be affected by music? Moreover, how can music therapy be used for treatment in a more practical sense? Music therapist and philosopher Eva Vescelius proposed that an individual always needs these two things if healing through music wishes to be achieved: the appropriateness of performer and appropriateness of musical selections...for any marked success there must be perfect harmony between transmitter and receiver, as the wireless sends a message intended for a certain ship, but unless the receiver is tuned to the pitch of the

transmitter, some other receiver that is so attuned catches its import” (Vescelius, 383). Music therapy falls under the umbrella of unconventional practices, and because of this it tends to hold far less significance and merit to more practical treatments.

Why exactly is it so difficult for music therapy to be regarded as a viable treatment option? Why are health care facilities so averse to using it? Vescelius theorized that “institutions are not yet alive to the importance of music as a beneficial and curative power hasn’t been accepted by most yet” the key reasons why many healthcare institutions are so reluctant to use it, is because they don’t see the value in it (Vescelius, 392). Since the practicing professionals are so reluctant in using this as a treatment, they neglect to inform their patients about this as a potential option. So many individuals believe that traditional and conventional practices are the way to go largely as a form of treatment.

In truth the association of music and healing is ultimately dependent on one’s ability to process its complex structure. In the article for The Dana Foundation, How Music Helps to Heal the Injured Brain, Issac Sashitzky concluded that: “music is a highly structured auditory language targeting areas of complex perception, cognition, and motor control in the brain” (Sashitzky). Music efficiently accesses and activates these neurological systems and drives complex patterns of interaction among them, by doing this it can effectively be used to retrain and reeducate the injured brain. Additionally, in the music quarterly, Vescelius explains how music can be applied to help treat the mentally ill: “music has been employed to any appreciable extent in the treatment of the insane.the slow, rhythmic, musical measures have a more soothing effect on them than quick, sharp, jerky ones. Music is always beneficial to the insane. It helps to throw off an excess of motor excitement, giving them all the musical entertainment possible” (Vescelius, 392). While music may be used to support the brain and engage with its

complex dynamic networking system, as a stimulus it triggers psychological responses that help with the process of healing; while simultaneously promoting mental health.

So how do we (the average patient) protect our mental health and avoid misconceptions about treatment options? Sociologist Peggy A. Thoits states “ when events and strains accumulate in people's lives, they can overwhelm people's psychosocial resources and abilities to cope in doing so they generate symptoms of psychological disorder”. She proposed a solution to alleviate this overwhelming feeling, it was her belief that people engage in activities, such as being active, writing, and even listening to music as a way of coping and social support (Thoits, 106 & 111). In doing so, your psychological responses seem less threatened and overwhelmed, by the strain it's placed under. In addition, Vesceius suggests that: “Music cannot be named along with many drugs in terms of apparent accuracy of result. Its place is not in any ordinary catalogue or pharmacopoeia; it belongs rather to that group of natural recreational forces which are acting in every healthy life” (Vesceius, 379). While at first seemingly unconventional and unorthodox, it proves to be vital in the treatment of the brain.

Music Therapy is indeed an important part of the medical practice, while unconventional it does prove itself to be an effective treatment. However, just listening to music and using it as a coping mechanism or crutch, is detrimental to both our overall mental health and ability to function in our environment. Therefore, my advice would be simple in order to use music as a viable option, it has to be used in a way that would support mental health. Also don't be quick to jump at one particular treatment, be more aware of all possible treatment options at your disposal--music therapy is just as important, and it's worth being considered a viable option.

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