A Jewish Perspective on the Depression Treatment rTMS

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In many countries, such as Canada, when one gets injured or suffers from an illness, they can seek medical attention without hesitation. No individual ever questions going to the doctor for something that is bothering them physically. However, if the pain being experienced is not a physical one, but a psychological one, would it be given the same importance? Would people be as quick and confident to go to their doctor's office and get the proper care needed? There has always been a stigma around the concept of mental health, which causes people to avoid seeking help. Until recently, society's view of mental health was that it was essentially non-existent. People did not talk about their anxiety, depression, or a variety of other issues they may have been experiencing. As a result, people in the past suffered in silence unnecessarily with devastating consequences. Fortunately, with the help of prominent people in society talking about their own personal struggles with mental health, others are now starting to feel more comfortable seeking the help they need. As a result of breaking the stigma, more treatments and medications are being developed to help alleviate some of the symptoms caused by mental illnesses. Mental health in the Torah is not a foreign topic. Considering the Torah's inauguration thousands of years ago proves how old this illness really is. The new prominence simply reflects a change in the paradigm surrounding the topic, propelling it to the forefront of treatment and trampling the stigma.

Among the many different mental illnesses that people suffer from, a relatively common one is depression. Depression negatively affects how a person feels, the way they think and how they act. It can cause feelings of sadness or a loss of interest in things one once enjoyed. Depression leads to a variety

of emotional and physical problems and can decrease the ability to function in day-to-day life. Symptoms can vary from mild to severe ranging in things like "Changes in appetite — weight loss or gain unrelated to dieting, trouble sleeping or sleeping too much, loss of energy or increased fatigue, increase in purposeless physical activity, feeling worthless or guilty, difficulty thinking, concentrating or making decisions, thoughts of death or suicide. Symptoms must last at least two weeks and must represent a change in your previous level of functioning for a diagnosis of depression." [1]. The National Institute of Mental Health reports that in 2020, 8.4% of the US population had at least one major depressive episode. Clearly, depression is pretty common and shouldn't be stigmatized. While there is no real cure for depression, there are multiple ways for it to be treated, all of which can improve symptoms and improve everyday life. Treatments ordinarily include therapy, medication, or medical procedures. According to the Mayo Clinic, the most common and effective treatments are medications and psychotherapy, with people usually opting for one of the two or both [2].

Another way to help alleviate the symptoms of depression is using rTMS treatments. rTMS (Repetitive Transcranial Magnetic Stimulation) is a non-invasive treatment that stimulates the brain's nerve cells by using magnetic fields. The therapy involves delivering repetitive magnetic pulses. rTMS is usually used when all other treatments for depression have failed. The FDA

approved the use of rTMS in 2008 for major depression and expanded the use to treat pain associated with certain migraine headaches in 2013 [3]. During an rTMS

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session, an electromagnetic coil is applied to the scalp close to your forehead. A magnetic pulse is painlessly delivered by the electromagnet, which stimulates the nerve cells in the part of the brain that is responsible for mood control and depression. According to studies, depression is linked to a reduced activity in the prefrontal cortex. The prefrontal cortex is involved with depression symptoms [4]. Therefore, it is helpful to activate regions of the brain that have decreased activity in depression. A study done on cognitive control in healthy human patients using ERP (event-related potential) after multiple rTMS sessions. They found that after the sessions, there was an increase in neural activity in prefrontal areas [5]. Other studies were done on rTMS and many of them found that rTMS increases activity in prefrontal areas. The full biology of how rTMS works to alleviate symptoms isn't fully understood. However, the stimulation from the sessions appears to impact how the brain works and alleviates depression symptoms and improves mood. It is an effective way to treat depression and can help many people. rTMS is a great option for people who don't respond to more mainstream depression treatments [6]

Despite rTMS's effectiveness, there can be some side effects of using rTMS. The most common ones are transient headaches, local discomfort in the simulation area, dizziness, ipsilateral lacrimation, and very rarely generalized seizure. A study was done on the side effects of rTMS. They tested a patient who had no history of autonomic headaches. After rTMS was done, the patient started reporting a development of sudden headaches with "characteristics of trigeminal autonomic cephalalgia on the stimulated side"[7]. This is showing another potential side effect of rTMS treatment. In regards to long term side effects, none have

been reported and patients who need rTMS shouldn't be worried about any long-term effects, only immediate side effects. After reviewing around 12 different studies on rTMS, overall, they showed there was an antidepressant effect from continuous rTMS sessions. Each study focused on a different effect of rTMS and it did show different results depending on what or where they focused their study. However, overall rTMS is seen as a safe way to treat depression when no other treatments work.

As mentioned, contrary to popular opinion, mental health and treatment is actually a concept that is included in the Torah. There are a few different examples of this. In Samuel I Chapter 16, King Shaul felt depressed when the spirit of G-d left him. He called David to play music to help treat his depression. This is a direct example of someone with depression in the torah and how they treated it [8]. As stated above, there are several different types of possible treatments for depression. So what is the Torah's perspective on treating mental illnesses? The Mishnah Shabbat 2, 5 says a story, "one who extinguishes the lamp because he is afraid of non-Jews, robbers, or an evil spirit, or so that a sick person may sleep, he is exempt "[9]. This Mishnah is explaining that usually putting out a fire is not allowed on Shabbat, but saving someone's life always takes precedence over the laws of Shabbat. The question is what type of sick person is the Mishnah talking about. The sick person is someone with a potentially life-threatening disease which was further clarified as depression. Based on this mishnah, it is seen that one should treat depression like any other physical sickness [10]. This is observable with how Rambam decided to treat one of his patients. He had a Muslim patient who was depressed and he recommended he should consume some wine to feel better. His explanation to this is

that "saving a life is itself a religious duty that supersedes virtually all other religious obligations." This is why he permits his Muslim patient who suffers from depression to drink wine, despite this not being allowed in Islam [11]. There are more commentators who also talk about depression. Rabbi Yonah of Gerona said that one shouldn't ever be in a constant stage of sadness since it is a physical disease. Rabbi Yehuda Halevi wrote in the Kuzari "It is not in accordance with the spirit of the Torah to worry and feel anguish throughout one's life; one who does so transgresses the Almighty's commandment to be content with what he has been given." Overall it is seen in Judaism that a person should not stay in a state of depression and should get the proper treatment to feel better [7].

Mental health is a topic that needs to be talked about. Countless people struggle with it, and even though the issue is finally entering the public eye, it is still not enough. As stated above, depression was discussed in the torah. If someone is struggling with depression, the Mishnah and other commentators clearly state that the person should seek help and get the proper treatment. Whether that be the more common treatments such as medication, or a treatment like rTMS. rTMS is a great option to help alleviate the symptoms of depression. Many studies were done on rTMS and are still being done and all are showing a positive effect to help patients with depression. Mental health should be treated the same way as a person's physical health and seeking treatment shouldn't be any different. This concept aligns with what the Torah says about mental health.

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References

[1]https://www.psychiatry.org/patients-families/depression/what-is-depression (retrieved Jan 19, 2023), Felic T.

[2]https://www.mayoclinic.org/diseases-conditions/depression/diagnosis-treatment/drc-20356013 (retrieved Jan 19, 2023), Mayo Clinic staff

[3]

https://www.fda.gov/news-events/press-anno uncements/fda-permits-marketing-transcrani al-magnetic-stimulation-treatment-obsessive -compulsive-disorder#:~:text=Transcranial %20magnetic%20stimulation%20(TMS)%2 0is,certain%20migraine%20headaches%20i n%202013. (retrieved Jan 26, 2023)

[4] Janicak, P., and Dokuc, M. (2015). Transcranial magnetic stimulation for the treatment of major depression.

Neuropsychiatric disease and treatment 11: 1149-60

[5] Li, Y., Wang, L., Jia, M., et al. (2017). The effects of high-frequency rTMS over the left DLPFC on cognitive control in young healthy participants. PloS one 12 [6]https://www.mayoclinic.org/tests-procedures/transcranial-magnetic-stimulation/abo [7] Durmaz, O., Ates, M., Senol, M., et al. (2015). Repetitive Transcranial Magnetic Stimulation (rTMS)-Induced Trigeminal Autonomic Cephalalgia. Noro psikiyatri arsivi 52,3: 309-311 [8]https://www.juf.org/news/local.aspx?id=4

[8]https://www.juf.org/news/local.aspx?id=4 29783 (retrieved Feb 2, 2023)

[9]https://www.sefaria.org/Mishnah_Shabba t.2?lang=bi (retrieved Feb 1, 2023)

[10]https://www.sefaria.org/Mishnah_Shabb at.2.5?lang=bi&with=English%20Explanati on%20of%20Mishnah&lang2=en (retrieved Feb 1, 2023) [11]https://ajp.psychiatryonline.org/doi/10. 1176/appi.ajp.2007.07101575 (retrieved Feb 2, 2023)

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