Lifestyle Medicine as a Public Health Solution for Treatment–Resistant Depression (TRD)

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Treatment–resistant depression (TRD) is defined as failing to fully remit after 2 antidepressant treatments of adequate dose and duration. A study that analyzed commercial insurance claims, Medicaid, and the Veterans Administration populations showed TRD to be a very costly healthcare disorder thereby making TRD a major public health concern for policymakers. Studies were analyzed and the results of the cost–effective lifestyle medicine practices in treating TRD are shared. Recommendations include further funding and resources and more advanced research in using lifestyle medicine to treat TRD and other mental health problems.

Keywords

TRD • Treatment-resistant depression • lifestyle medicine • depression • mental illness • public health

Treatment–Resistant Depression is a Public Health Concern

Approximately 14.8 million people over the age of 18 had at least one major depressive disorder (MDD) episode in the US, making it the leading cause of disability in 2020 (ADAA, 2020). As much as 60% of MDD patients are considered to have treatment–resistant depression (TRD) depending upon the remission criteria (Eisendrath et al., 2016). Most commonly, TRD is defined as failing to fully remit after 2 antidepressant treatments of adequate dose and duration (Eisendrath et al., 2016). Compared to non–TRD MDD patients, patients with TRD have a remarkably higher risk of all–cause mortality (Li et al., 2019).

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Since previous studies showed the costliness of TRD to the healthcare system, Pilon et al. analyzed commercial insurance claims, Medicaid, and the Veterans Administration populations, which demonstrated that TRD was a very costly healthcare disorder (Pilon et al., 2019). TRD poses higher costs of healthcare resource utilization compared to treatment–responsive MDD or non–MDD patients (Li et al., 2019). Hence, TRD is a public health issue of particular concern to policymakers and the healthcare industry treating it.

TRD, Substance Use Disorders, and Drug Treatments

Brenner et al. found that patients with TRD were at greatest risk for substance use disorders (SUD) compared to MDD patients (Brenner et al., 2020). Patterns varied, depending on if a TRD patient had a history of SUD or not. Sedative use disorder in TRD patients had a 2– to 3–fold increase compared to MDD patients. Despite this, the currently recommended approaches for treating TRD include switching within and between different classes of antidepressants; combining antidepressants with medications, such as anticonvulsants or antipsychotics; using psychotherapy alone or alongside pharmacological therapy; and neurostimulation (Brenner et al., 2020). Brenner et al. determined that comorbidity of SUD may be a risk factor for TRD; hence, management and alternative treatments for both TRD and MDD patients not yet suffering from TRD need to be explored.

While selective serotonin reuptake inhibitors (SSRI) are the most commonly prescribed antidepressants today, they are not as effective as their popularity may suggest. Irwin Lucki, PhD, an expert on the opioid epidemic, noted that as much as 50 percent of depressed patients are resistant to SSRI therapies (*Opioids*, 2019). First discovered in the 1950s, SSRI may perhaps be outdated. The upcoming sections will share some psychotherapy programs that successfully integrated lifestyle medicine.

Treating TRD With Lifestyle Medicine

Lifestyle Medicine is a low–cost and potentially safer means to prevent, promote, and manage health and well–being by considering patients' lifestyles; this includes sleep habits, food intake, movement, and more (Sarris et al., 2014). One notable TRD lifestyle medicine approach is Mindfulness–Based Cognitive Therapy (MBCT). MBCT is an 8–week group training program for depression that integrates mindfulness meditation techniques with cognitive behavioral therapy elements (Eisendrath et al., 2016). MBCT has been proven to reduce rumination in remitted and currently depressed patients. Eisendrath et al. conducted a randomized study of 173 TRD patients assigned to either MBCT or a Health Enhancement Program (HEP) which consisted of physical fitness, music therapy, and nutritional education, as well as treatments–as–usual, or standard care, pharmacotherapy. In both the primary and secondary analysis of participant survey measures, MBCT significantly reduced depression severity compared to HEP. Although rates of remission improved in MBCT for TRD patients, results were not statistically significant. Nonetheless, TRD patients reported MBCT to be a useful treatment.

In previous studies, TRD patients typically have concentration problems with their assigned therapies, but Eisendrafth et al. found that their subjects were able to concentrate and carry through with their MBCT or HEP. Additionally, these depressed subjects reported they were looking for

nonpharmacological treatments and found MBCT and HEP to be empowering. Overall, adding these alternative treatments to TRD patients' lines of treatment is recommended.

There are many known lifestyle–based and nonpharmacological approaches for improving mental health and emotional well–being, among them dietary changes (Morton, 2018). Recently, researchers have shown reductions in depressive symptoms and improved mental health among those who adopted a Mediterranean–style diet (Parletta et al., 2017). Exercise has also been shown to alleviate depression yet widely underused antidepressant (Morton, 2018). Exposure to natural environments may improve emotional well-being (McMahan & Estes, 2015). Blue and green exposure and/or light therapy may be an effective therapy for depression (Morton, 2018; Lam et al., 2016; Tuunainen et al., 2004).

A good night's sleep is crucial for optimal mental and emotional health (Sarris et al., 2014). Modifications to one's lifestyle, such as reduction of alcohol and cigarette smoking, and increased physical exercise showed some improvement in sleep and stress disorders (Merrill et al., 2007). Positive thinking training was seen to improve older adult's life satisfaction (Taherkhani et al., 2023). Participation in service activities or volunteering was shown to positively reduce depressive symptoms and major depression in relation to stress disorder (Griep et al., 2023). Mindfulness based meditation proved to be a promising intervention for treating anxiety and mood disorders (Hofmann et al., 2010). Positive social interactions were also shown to reduce the likelihood of depression (Stafford et al., 2011). Attention should be given to such evidence–based lifestyle medicine strategies listed above for combating depression.

Religious Integrated Psychotherapy for Depression Significantly Reduced Symptoms

Religious psychotherapy was found to be at least as effective as conventional psychotherapy for patients with depression and anxiety (Paukert et al., 2011). Clinical psychotherapy or behavioral activation psychotherapy has been a well–supported method to treat patients with mental health problems, but has the ability to reduce symptoms by nearly 50% of the time (IsHak et al., 2023). A systematic review of 11 articles was conducted to see if religious integrative psychotherapy was more successful (Paukert et al., 2011). Nine of the 11 studies examined only depression, and all showed significant reduction of symptoms. None of the 11 studies showed to have a lesser effect when compared to conventional therapy methods.

These 11 studies only studied Christian and Muslim participants. At first look, one may find that religious psychotherapy was more successful for Muslims compared to the control secular psychotherapy. However, the researchers state that the Muslim study participants reported a high level of religiosity. Therefore, the Muslims may have been more willing to adapt the religious practices more comfortably. Further research should be conducted for religious integration in psychotherapy for TRD patients as alternatives to pharmacological treatments and therapies.

TRD, Lifestyle Medicine, COVID-19, and Telehealth

The COVID-19 pandemic altered the lives of people around the world, including patients with TRD, who may have found it hard to receive treatment. That is why, Navarro et al.'s November 2020 paper regarding their on–going clinical trial aimed to "evaluate the effectiveness of an Internet–based

adjuvant lifestyle–based intervention for patients with TRD" was quite notable. TRD can be exacerbated by stressors that have become more common due to the COVID–19 pandemic, such as poor physical health and economic struggles. Information and communications technologies and video conferencing were proposed. Navarro et al. hypothesize that by their 1–year follow–up, the lifestyle program group will show greater adherence and therefore benefit of the intervention. While no follow–up report was found, this study demonstrates a cost–effective approach to treating TRD that may be considered and easily duplicated.

Conclusion

We recommend that time, resources, and funding be allocated to support the cost–effective lifestyle medicine interventions for TRD, MDD, and mental health problems in general. The idea that TRD could be successfully treated by combining lifestyle medicine with technology and religious integration alongside (and, hopefully, in place of) pharmaceuticals is promising. As such, lifestyle medicine deserves the attention of public health physicians and practitioners, health policy advocates, health education specialists, and other key stakeholders. The goal of this paper was to introduce lifestyle medicine to fellow public health researchers in hopes that they will further explore the benefits for TRD patients.

Further research on the cost–effectiveness and efficacy of lifestyle medicine as compared to modern pharmacological medicine is also recommended. A concerted effort to better understand lifestyle medicine from a public health perspective may have major implications on the population's overall health and economic well–being.

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