

REVIEW ARTICLE

THE USE OF OSTEOPATHIC MANIPULATIVE TREATMENT AS A THERAPY FOR MENTAL HEALTH DISORDERS: A REVIEW

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KEYWORDS

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OMT
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ABSTRACT

There is historical and modern evidence for the use of osteopathic manipulative treatment (OMT) to treat patients with mental health disorders. The first section of this article examines the historical perspective, focusing intently on the Still-Hildreth Sanatorium. This hospital specialized in the osteopathic treatment of mental illnesses. While it was open, it saw patients with diverse mental disorders and reported exceptional recovery rates. However, some data from this institution were destroyed, so this perspective is incomplete. The second part of this article examines modern osteopathic research into this topic. Although there is some literature supporting the use of OMT for mental disorders, overall, it is underwhelming. Few mental illnesses have been researched, and for those that have been, there are too few studies to reliably assess the outcomes. Moreover, these studies have limited sample sizes, further affecting their credibility. To accurately gauge the benefits of OMT, future work should overcome these limitations.

INTRODUCTION

When A. T. Still created osteopathy, he never intended for it to be separate from allopathy. Rather, he noticed limitations in the current medical field and sought to overcome them. His meticulous work culminated in the establishment of this new medicine.¹ Osteopathy was built on a unique philosophy: the body is a unit; it is capable of self-regulation and self-healing; structure and function are reciprocally interrelated; and rational treatment is based on these principles.² It differed from the current medical field because it emphasized the need for a rational and scientific basis.³ Dr. Still founded an institution to teach this philosophy, and now there are 38 osteopathic medical schools in the United States.

While both teach the standard medical curriculum, there are several distinctions between osteopathic schools and their allopathic counterparts. Perhaps most notable is the educational focus on osteopathic manipulative treatment (OMT). Osteopathic manipulative treatment involves the identification of somatic dysfunctions in the patient and the utilization of specific techniques to correct them. The techniques are highly versatile and can be utilized in the treatment of numerous conditions. For

instance, studies have demonstrated that OMT can reduce back pain and osteoarthritis-associated knee pain.⁴⁻⁶ Research also suggests that OMT can ameliorate symptoms of migraines and reduce their duration.^{7,8} Additionally, it can enhance lymphatic flow in patients to help reduce edema.^{9,10} More recently, OMT has also been shown to improve the symptoms of patients diagnosed with COVID-19.^{11,12} Although research is limited, it is clinically clear that OMT is versatile and effective.

Mental health disorders in the United States are widely prevalent and have an immense economic impact.^{13,14} They have become a focal point of the healthcare field and are potentially as serious as corporeal disorders. They encompass a wide range of conditions with specific diagnostic criteria established by the DSM. An estimated 26% to 32% of American adults suffer from a mental illness, with 6% suffering from a severe disorder.¹³ Moreover, research suggests that only approximately one-third of patients with a serious illness recover.¹⁵ While debilitating disorders like schizophrenia could contribute to these low recovery rates, another possible explanation is that there is a negative stigma surrounding mental health, and it creates a barrier for patients to seek treatment.¹⁶ In the public eye, people with mental health issues are viewed as dangerous.¹⁷ To avoid being branded as violent, they refrain from receiving help for their conditions.

Since OMT has proven effective in managing a plethora of conditions and because mental illnesses are common in our society, the use of the former to help treat the latter has been questioned. The focus of this article is to answer that question, specifically if the use of OMT can aid in the therapy of patients with mental disorders. To effectively review this topic, the

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article will explore two unique perspectives. Initially, it will look at the historical evidence from the time of A. T. Still and the first osteopaths. Afterward, it will examine the research that modern osteopaths have done on the topic. The article will then conclude with a summary of the field and where future endeavors should go.

THE EARLY YEARS OF OSTEOPATHY

Early osteopathy was initially met with considerable allopathic scorn and public skepticism. These feelings created barriers to the growth and credibility of the field. Patients were cautious about being treated by an osteopathic physician and, at a systemic level, laws were established to prevent them from practicing.¹⁸ This discrimination extended to the military, where DOs were not given the same rights as their allopathic counterparts.¹⁹ However, the meticulous work of Dr. Still and his successors was eventually fruitful. To gain a reputation, Dr. Still would publicly demonstrate his ability to treat patients. The field also gained respect when he healed patients forsaken by allopathy.²⁰ In these instances, Dr. Still would examine the body for underlying lesions—areas that were not functioning properly due to a structural misalignment. Upon finding them, he would correct them, often resulting in recovery.²⁰ On occasion, the patients who were discarded from allopathy had mental illnesses. One example was a young girl who had suffered since infancy from extreme nervousness (anxiety). Her condition would cause her to fervently yell, and no efforts to placate her were effective. Dr. Still was able to find an underlying lesion and, upon correcting it, the girl recovered.^{21,22} In another instance, a father sought out Dr. Still's help for his daughter. She was healthy until she fell from a vehicle and was injured. Her condition was so severe that she was placed in a state institution. A. T. Still examined her and found a displaced joint in her upper cervical vertebrae. He amended the lesion, and, in time, the patient recovered her senses.^{21,23}

As alluded to, the osteopathic treatment for mental health diseases was similar to that of other illnesses: find the anatomical abnormality, and, upon rectifying it, mental health should return.²⁴ It was widely believed that the root of mental illness was a vascular or nervous problem. There was a lesion in the body compromising the blood flow or innervation, and correction of this restriction would cause recovery from the mental ailment.²⁴⁻²⁷ In mental health patients, these lesions were commonly found in the cervical or thoracic vertebrae. Often, patients would also present with gastrointestinal problems, so care was taken to examine the kidneys and bowels, too.²⁴ While OMT was the primary osteopathic technique, at times, adjuvant treatments were utilized. For instance, there is a record of the implementation of hydrotherapy to help treat patients with mental disorders.^{26,28} Moreover, osteopathy emphasized the importance of diet on healing and, thus, most patients had a nutritional component to their treatment plans.²⁶

While there was limited record of A. T. Still treating patients with mental health problems, his students would ultimately be the ones to set the example of osteopathic care for mental disorders. Arthur Hildreth was a close friend of Dr. Still and a student in the first graduating class at his medical school.^{29,30} He was an avid

believer in the power of osteopathy and even played a pivotal role in getting osteopathy legalized in Missouri.³¹ Early in his career, Dr. Hildreth saw patients with all kinds of diseases, and, consequently, he had limited experience with mental illnesses. Most notably, he was brought a young girl diagnosed with suicidal mania. He examined her, found restricted vertebrae, and corrected them. After a couple years of therapy, the girl was well enough to be taken home by her mother.³¹

Dr. Hildreth's career changed drastically in 1913 when he was approached by Drs. Harry and Charlie Still, the sons of A. T. Still. They had been propositioned about converting an old military base into an institution for the osteopathic treatment of mental illnesses and wanted Dr. Hildreth to manage it.^{21,31} He quickly accepted, and the Still-Hildreth Sanatorium was founded. The hospital's goal was not just to care for the patients, but also to cure them; Dr. Hildreth used specialized plans for each patient to identify and eliminate the root cause of the problem.³² Similar to the instances mentioned previously, anatomical restrictions were often found in the patients and documented.³³ As mentioned earlier, these lesions were often in the cervical or thoracic vertebrae and correcting them could prove beneficial to the patients.

Within a couple of years, the results at the Still-Hildreth Sanatorium proved to be exceptional. The osteopathic treatment of mental illnesses was effective. This success was quickly disseminated through journals. The hospital was praised as a model example of the capabilities of osteopathic medicine and its accomplishments were celebrated universally in the field.^{34,35} With each successful patient discharge, the osteopathic field gained credibility with the public. Perhaps the main reason that the institution was so widely commended was that it took in patients that the allopathic field could not help and cured them.^{36,37} Previously, conditions such as Bell's mania, schizophrenia, and amentia were considered incurable, but the Still-Hildreth Sanatorium showed the world that recovery was possible.³⁶ A. T. Still was proud of this success and routinely wrote about it. Even his final message before he died praised the work that the sanatorium was doing.²¹

It is beneficial to examine the recovery rates of the patients and the types of patients that the hospital was treating to better understand the achievements of the Still-Hildreth Sanatorium. Throughout the lifetime of the hospital, it reported an average recovery rate of approximately 50%.³⁸⁻⁴⁰ While these averages are for all illnesses that were treated and only at a specific moment in time, they give a general idea of the hospital's capacity to cure patients. Looking more specifically, data from the Museum of Osteopathic Medicine in Kirksville, Missouri, were used to generate multiple tables.⁴¹ Table 1 examines the common disorders of the sanatorium's patients. Most patients were diagnosed with schizophrenia, bipolar disorder, or anxiety disorders. However, there were patients with other conditions as well. Table 2 investigates the outcomes of therapy for the most common mental disorders. Excluding dementia cases, between 30% and 50% of patients had a full recovery, close to the average that the institution, itself, reported. While this value may not seem impressive, the average recovery at a contemporary sanatorium was merely 3%.^{42,43}

While the Still-Hildreth Sanatorium was seemingly successful, certain factors eventually led to its closure in 1968. One crucial component in the institution's decline was the production and increasing availability of psychotropic medications.^{42,44} With the development of promising novel drugs for the treatment of mental health disorders, patients began to opt for this therapy as opposed to osteopathy. Freudian philosophy also contributed to the failure of the sanatorium.^{42,44} This archetype linked touch to sexuality and resulted in reduced use of OMT. This was the principal treatment at the Still-Hildreth Sanatorium, and without it, the ability to treat patients was greatly affected. The hospital tried to adapt. It used new treatments and utilized some drugs. For instance, people with schizophrenia were treated with insulin shock therapy.^{45,46} However, these adaptations were ultimately in vain. The sanatorium merged with the Kirksville College of Osteopathic Medicine and, after neglecting to implement suggested changes, it closed.⁴²

MODERN OSTEOPATHY

Present-day osteopathy has evolved over time. A. T. Still believed that drugs should be reserved for treating poison only, and that in other cases, osteopathic principles yielded the best results.²¹ In contrast, modern osteopathy has acknowledged the benefits that medications can have on patient outcomes, and now most DOs use them as often as their allopathic counterparts. Another distinction is that osteopathic doctors used to practice family medicine, but they are now found in every specialty.⁴⁷ While there have been changes to osteopathy, the core tenets remain, as does the teaching of OMT, although the use of OMT in practicing osteopathic physicians has been declining.^{48,49} Consequently, the literature for the use of OMT to treat mental health disorders is predominately underwhelming.

There has been some research that has looked at the benefits of OMT in the treatment of anxiety. One study recruited people with a primary diagnosis of generalized anxiety disorder and assessed them with the Hamilton Anxiety Rating Scale (HAM-A) and two self-reported questionnaires.⁵⁰ Every participant received five sessions of OMT, after which results were measured by reassessing HAM-A scores and the self-reported questionnaires. While they found a significant reduction in HAM-A scores and one of the questionnaires, there was no change in the other one. The study posited that the questionnaire did not change because it more closely measured the fear of anxiety as opposed to the severity of symptoms and because the scores were already relatively low at the beginning of the study.⁵⁰ Another study using similar criteria also found a significant reduction in the levels of anxiety in patients after several sessions of OMT.⁵¹ These studies demonstrate the potential that OMT has in helping patients with anxiety.

Research has also examined the use of OMT in the treatment of depression. A 2001 study recruited women using the Zung Depression Scale and separated them into an OMT therapy group and a control group.⁵² This study reported that both groups had significant improvement via a reassessment using the Zung

Depression Scale. However, the OMT group reverted to the normal range, or no psychopathology, by the conclusion of the study, while most of the control group still had moderate depression.⁵² A similar study also found a significant decrease in the level of depression in participants after OMT.⁵¹ However, another study that looked at self-reported depression in first-year osteopathic medical students found no significant reduction after treatment with OMT.⁵³ This study has a major confounding variable though, as every participant was a medical school student. Medical school is rigorous, and it is possible that this stressful environment skewed the data and made it seem like OMT is not effective. These results illustrate the need for further research. More thorough studies might elucidate the benefits of OMT on depression.

Some studies have looked at the outcomes of patients with attention deficit hyperactivity disorder (ADHD) following OMT. One study recruited children with a primary diagnosis of ADHD and placed them into two groups.⁵⁴ Both groups received conventional care, that is, drug therapy, but the experimental group was also treated with OMT. Outcomes were primarily measured by the administration of a pre- and post-Biancardi-Stroppa Modified Bell Cancellation Test. The researchers found that the members of the intervention group had statistically significant improvements as measured by posttest, suggesting improved symptoms.⁵⁴ A related study also suggested that OMT has a positive effect on children with ADHD.⁵⁵ These experiments show that OMT can potentially be beneficial in the treatment of patients with ADHD.

While limited, data support the use of OMT for post-traumatic stress disorder (PTSD). In a pilot study, soldiers with PTSD were recruited and given two sessions of OMT prior to receiving any intensive outpatient therapy.⁵⁶ The researchers reported using an array of assessments to measure the results of the study. Almost all the tools used showed a decrease in symptoms and an increase in cognitive ability. Moreover, the self-reported intensity of headaches and anxiety decreased.⁵⁶ Another study has looked at the use of OMT in treating PTSD, but at the time of publication, the data remained under evaluation.⁵⁷ Additionally, other studies have looked at treating stress with OMT, not necessarily PTSD but a crucial component of it. However, the results are varied.^{53,58} Since the literature is conflicting and limited, more studies are needed to assess the benefits of OMT for PTSD.

The modern literature evaluating the value of OMT for mental disorders is limited. Many mental illnesses have not been studied, and those that have are restricted by their limitations. For instance, while obsessive-compulsive disorder, bipolar disorder, schizophrenia, eating disorders, and personality disorders are prevalent in our society, there have been no studies evaluating whether OMT improves their outcomes. Even with mental disorders in which OMT has been studied, there have been too few studies to reliably assert the treatment's benefits. They might suggest that OMT can improve symptoms, but without more studies, it is difficult to definitively ascertain. Also, the studies that do exist have notable shortcomings. They often do not have a control group, making their results weaker, and they universally have a small sample size. Without testing a larger population, it is difficult to apply the outcomes to the general public.

TABLE 1:
Common Diagnoses of Patients at the Still-Hildreth Sanatorium

PATIENT DIAGNOSIS	PERCENTAGE OF PATIENTS WITH DIAGNOSIS
Schizophrenia	36%
Bipolar disorder	19%
Anxiety disorders	12%
Mental disorder due to medical condition/pregnancy	8%
Dementia	7%
Depression	6%
Other conditions (nonpsychiatric, nonmedical, etc.)	12%

TABLE 2:
Outcomes of Therapy for Common Mental Illnesses at the Still-Hildreth Sanatorium

Patient Diagnosis	Recovery	Improvement	No Change/Worse	Death	Unknown
Schizophrenia	29%	26%	36%	2%	7%
Bipolar disorder	51%	25%	9%	4%	11%
Anxiety disorders	48%	23%	10%	1%	18%
Mental disorder due to medical condition/pregnancy	30%	18%	25%	9%	19%
Dementia	5%	15%	47%	15%	18%
Depression	30%	32%	16%	6%	17%

CONCLUSION

There have been historical examples of using OMT to treat patients with mental health disorders. As discussed earlier, A. T. Still, himself, had some documented case examples. However, the historical precedent for osteopathic treatment of mental illness was the Still-Hildreth Sanatorium. While it was open, this hospital cared for a diverse population of patients with varying mental disorders. It treated these patients primarily osteopathically and reported exceptional recovery and improvement rates in most cases. However, later in its course, the use of OMT declined due to the public's negative perception of the treatment. Being unable to fully adapt, the sanatorium closed. While an excellent example, there are limitations to the hospital's data. Before the Museum of Osteopathic Medicine in Kirksville, Missouri acquired them, some records were destroyed. In addition, while records do mention somatic dysfunctions, the specific osteopathic techniques utilized are absent from them. Therefore, our historical knowledge is incomplete.

Modern osteopathy has yet to fully explore whether OMT can improve results in the treatment of patients with mental illnesses. While studies have specifically investigated the use of OMT for anxiety, depression, ADHD, and PTSD, there are important constraints in them. The number of studies for each mental disorder is lacking, and they suffer from a small sample size. As a result, there is conflicting evidence in the literature, and the findings are not generalizable to the public. Additionally, there are many mental disorders that have not been the subject of this type of study. Without any research, it is impossible to know if these patients would benefit from this therapy. Future work should seek to overcome these shortcomings by using robust sample sizes to ensure that results are accurate and applicable to the greater society. Moreover, they should pursue research into different mental health conditions to assess the true versatility of OMT. It is hoped that this review will renew interest in the use of OMT as an adjunctive therapy for mental disorders. Demonstrating the benefits of OMT will likely help in the treatment of many patients.

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