

## Reconsidering Psychopharmacology: The Logical Approach

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### Abstract

The aim herein is to show the need for reconsidering our approach to the use of psychopharmacology as a standard treatment for mental health. Although the most recent scientific research supports abandoning it altogether, this paper presents arguments using pure logic. Using one of the simplest valid propositional forms, Modus Tollens, the argument will flow as follows: if a method is successful, it must meet specific criteria; the method does not meet the required criteria; therefore, the method is unsuccessful.

**Keywords:** Psychopathology; Neuropsychology; Neuroscience; Mental health; Schizophrenia

### Introduction

When standing on the shoulders of giants, it is essential to respect the view from where we stand, but also, we must consider the weight of our children whom we will bear. It is easy to look below and overlook the amazing feats that came before us. Knowingly, we are ever in the present, which gives us an interesting perspective when looking back. It is invigorating to reflect on our journey as a triumph through time. After all, we have made ground-breaking discoveries that blast us from the past into an everlasting bliss of tremendous achievements. Looking through history, we have always come across findings that defy our past. Notwithstanding, it is important for us to refrain from priding ourselves in having the highest understanding humans have ever had because it is too easy to get caught up in the feeling of having it right. Why would we compare ourselves with the past? We need to accept that we have things wrong, and in the name of science, we must expose our weaknesses. The objective of this paper is to envision our next move on treating psychological disorders with a focus on schizophrenia.

The aim herein is to show the need for reconsidering psychopharmacology as a practice for mental health. Although recent scientific research supports this claim [1-4], the structure of delivery will remain of pure logic. Using one of the simplest valid propositional forms, Modus Tollens (i.e.  $P \rightarrow Q, \neg Q$  infers  $\neg P$ ), the argument will flow as follows: if a method is successful, it must meet specific criteria; the method does not meet the required criteria; therefore, the method is unsuccessful.

If treatment for mental illness can be deemed successful, it must eradicate the illness and provide lasting virtue on humankind in the absence of unwanted consequence. The delivery herein will use schizophrenia as the focus for all mental conditions for two primary reasons. Firstly, it is the “most chronic and disabling of all major mental disorders” [5]. Secondly, it is the costliest condition in the world [6]. Even by proving anti-psychotic medications not to be the most successful method for treating schizophrenia, it would not necessarily show that all psychopharmacological interventions fail. It will, however, illustrate how to treat the most thought-to-be-drug-dependent psychological disorder more successfully.

### History of Treatment for Schizophrenia

When we look back to the fifth century B.C., it is quite easy to ridicule bloodletting as “rational treatment” for schizophrenia. However, just before that time, it was widely accepted that delusions, hallucinations, disorganized speech, and the like were demon-manifestations in one’s body needing destruction [7]. In this light, Hippocrates provided a

new method of treatment based on reason. He based his reasoning on a proposed theory that body and mind relied upon four bodily fluids including blood, phlegm, black bile, and choler, which he called “humors.” His theory was based on intuition more than anything we would call science in today’s world, but this theory he proposed was revolutionary in the sense it brought a biological explanation for mental health [8]. Without the scrutiny of science, a theory is unable to develop in the way we know it now, but by mere “tinkering” combined with trial and error, the path to helping a troubled mind began to make way. Not to be forgotten, hundreds of years after Roman and Greek advancement in medical sciences and psychological disorders came a period known as the Dark Ages, where rational thinking was plunged back from where it came, so demonizing schizophrenia would become the norm again. There has been speculation on whether the persecution of witches at these times, in fact, had mental disorders or not. Regardless of this trivial point, the rationale behind actions was at a tremendous scientific decline. Gradually, minimal amounts of compassion grew into the eventual recognition that people with mental disorders needed professional help. During the 15<sup>th</sup> century, reforms were made for more humane treatment of people with these disorders, and asylums were used to treat them [9]. The living conditions at this time were far from humane, but it orchestrated a shift in understanding such illnesses.

### A Gambol Through Time

So, here we are in the midst a new age of technology changing too rapidly to appreciate the brief time it will appear from our successors looking back while upon our shoulders heisted far beyond from where we now stand. There is only one persistent truth that has never led us astray in all scientific pursuit of knowledge; namely, we improve our methods. Drugs have been proven effective in treating schizophrenia [7], but it is imperative to ask: at what cost? In the 1950s, first-generation drugs were introduced to treat schizophrenia at the expense of muscular and neurological abnormalities while symptoms of schizophrenia still largely persisted. In the last quarter of a century, second generation drugs such as clozapine showed promising results,

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but the most recent studies fail to show vast improvement when it comes to adverse side-effects or long-term relapse prevention [10]. Despite the advancements we have made in treating schizophrenia in over the past 50 years, we have failed to eradicate the illness and have often created more problems in our attempts [11]. More importantly, we have not established long-lasting virtue for mental health. To reach this virtuous state, we need a holistic approach that focuses on preventing and healing disorders with healthy lifestyles (e.g., diet, exercise, meditation). Not only do medications often only mask symptoms, but they also do so at the cost of numerous harmful side-effects, such as the disabling effect of tardive dyskinesia from clients taking major tranquilizers [2]. When looking at the mere process of metabolism, is it not necessary that other parts of the body including the brain will be affected? Not only must the chemicals circumnavigate the body through the circulatory system and filter through the kidneys and liver, but they even alter the brain chemistry in more ways than the one intended from the drug [1]. The very fact that people diagnosed with schizophrenia have been able to discontinue all medication by changing their diets [12,13] is enough to spawn serious interest into the relation of healthy living and psychological disorders. Moreover, there have been repeated studies all showing substantial evidence that yoga and meditation can relieve psychotic delusions and other schizophrenic symptoms [14]. Whether or not a holistic approach to healthy living is a panacea for curing all psychological disorders has yet to be established; however, there is ample evidence for the value of research to be aimed in this direction [12,13,15]. The fruits of this labor will be able to provide the lasting virtue of successful treatment free of any adverse consequence by merely altering habits and diet.

Medications have been an intricate part of treating mental health issues for well over a century. Through their use and the research conducted thereof, we have gained an understanding of brain chemistry and neurobiology inequivalent of any other research [16]. This invaluable knowledge should be cherished as we reap the benefits of the giants who came before us.

Even though the data we have is irreplaceable, the methods used when acquiring it are, in fact, wholly disposable. We are not bound by the ways that have proven most effective for so many years. We stand at a new dawn of time with the horizon far reaching from our grasp. Although it might sound risky and an uncharted area of possible discovery, we must achieve innovative ways of interacting with the brain. We should accept medicinal intervention as the necessary step taken to achieve the understanding we now have and move on.

## What Does Our Future Hold?

It is true that diet, exercise, and meditation should be elemental in the healthy lifestyle of anyone battling mental unease of any form [17,3]; thus, necessary for humanity to prosper as we all seek psychological congruence in our lives. Again, this is a larger issue than the one at hand, but it is important to see the greater picture from any place we stand. One may argue, rightfully so, that some people have conditions too severe for a mere change of lifestyle. For instance, some individuals with the most chronic and debilitating psychological conditions may have been born with genetic abnormalities of brain chemistry, suffer from long-term chemical abuse altering the brain structure, or be at the mercy of a degenerative disease affecting cognitive abilities. Although diet, exercise, and meditation may not be enough to cure such individuals, it is undoubtedly worthy to acknowledge the synergetic effect they will have in combination with any treatment [18]. Let us remember that the objective herein is not to eliminate pharmaceutical intervention without using our scientific superiority gained from the

past to advance further, but rather to use every meme of insight we have learned in our scientific pursuit to serve humanity in long-lasting virtue.

It is time to interact directly with the brain. Our quest has provided us with a map of the brain we could not have even imagined at the start of using psychopharmacology to heal the mind. Through our progress in neuroimaging alone, we have made paramount discoveries of physical localities of the brain which express cognitive dysfunctions [16]. These developments call for new therapeutic neuroscience-based treatments in psychology, psychiatry, psychopathology, and all the future fields that have yet emerged from within these domains.

Aside from the financial influence in the political arena and the pharmaceutical companies' stronghold in preserving client/patient dependencies on medicines, we have every reason to move forward from the primitive ways of drugging our illnesses aside and getting closer to interacting directly with the source of mental complications. We have mapped the brain more in the last five years than we have ever done, and we will be able to say this for decades to come [19]. This path is where our future is when treating mental illnesses.

Neurological intervention may not even be the end-all cure we seek, but it is the area of science which will provide us with the knowledge we need to understand further the mysteries of the brain, the mind, and consciousness by either defining the three or coming up with an all-inclusive definition. Lieberman [20], a pioneer of Social Cognitive Neuroscience (SCN), experienced the merging of social science and biological science less than two decades ago. In hindsight, he admits it was inevitable, but in the early days, it had seemed unimaginable.

Awareness of all shifting scientific thoughts remains critical for each domain. If we fail to recognize what this means for treating psychological disorders, we fail to meet our clients where the science is; thus, we would not be managing to provide the most favorable treatment methods we have available. In all actuality, the more we learn, the less we must intervene. It may be easy to write-off this goal as overzealous optimism, but it must remain our goal even if it is a limit we cannot reach. Why continue to use a treatment plan that, although can produce adequate results, fails to work without tampering other body systems, thus, causing unwanted consequences, and doing little for the whole of humanity or our future?

It is easy for the unapprised individual to look at SCN with disapproval as reminiscent of early electroconvulsive shock therapy, insulin-coma therapy, or prefrontal lobotomies because it is "messing with the brain," but that could not be farther from what this actuality entails. To regard such inhumane and unfounded practice of our past as remotely parallel is to be uninformed with the times. Again, just like Hippocrates' ideas of bloodletting being an irrational method of treatment at present, he based it on the notion psychological conditions were biological, which was revolutionarily in the right direction at the time. Likewise, shocking the body or removing parts of the brain with little knowledge to what effect it will have remains unjustified, but the idea of interacting with mental functions by going to the source was and remains justified. In fact, with our constant progress in the fields of neuroscience, neurobiology, and neurology, it has become ever increasingly irrational to continue contaminating the entire body with chemicals to create the reactions we desire of brain chemistry when we, in fact, have better capabilities in achieving these ends by taking a neurological approach. Such methods have far better implications than a lifetime of ill effects and addiction to pharmaceuticals. In fact, our current capability and ongoing progress in the field make it a far

less intrusive process than one could imagine. With our technological abilities, we can operate with the most nano-point precision [16].

## Describing Our Present Abilities

Repetitive transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS) are two of the most popular non-invasive, rarely contraindicated, with little or no side-effects, and relatively easy to use methods of SCN. With rTMS, an electromagnetic coil is applied to specific parts of the brain and given magnetic pulses in those areas while tDCS involves specialized currents of weak electricity used to stimulate precise regions of the brain [21]. In combination with these methods, therapists can provide cognitive remediation, which entails cognitive functions training and psychosocial care for a complete therapeutic approach [4]. The advances are improving in real time; thus, further research is in need. Nevertheless, it provides the most promising future for treatment in psychopathology, psychiatry, and holistic therapy.

## Looking Back and Letting Go

When looking back at how far we have come, it is fair to say that we have continuously developed treatment plans that improved on our growing knowledge we have learned thus far. It is time for us to realize the peak effectiveness, of which pharmaceutical intervention is capable, has been reached. To shift from a psychopharmacological model to one of neuroscience is simply for the times. Our endeavors, our persistence, and our feats have not been in vain. The time, money, and effort given to developing psychopharmacology has achieved effective results and provided us with a better understanding of the human body, neurotransmitters, and brain function (Moore & Depue, 2016). We are not abandoning the science that brought us this far, the scientist who dedicated their lives to the cause, or the patrons invested within. We are merely ready to promote a more favorable treatment plan for psychological disorders. We must help troubled minds without imposing harm in any other form. We also must provide a society which embraces healthy lifestyles as part of healthcare.

Not all is lost for prescribed medication in treating psychological disorders. In fact, they may always have a place in research for understanding more about the brain and its relation to psychology. For instance, once we can map the functional activation of the whole-brain, as done in mice, pharmacological intervention can still prove beneficial in determining the particular regions of the brain necessary for specific functions, such as the expression of a particular behavior [22].

## Conclusion

We must both have an aim and means to achieve it. In psychopathology, psychology, and all related sciences, it is imperative we improve our understanding, our methods, and humanity at large. We must find improvements in our ways when able, or we must find new means to achieve our mark. Nothing short of perfection should be our goal. Even if this is a mathematical limit that cannot be reached, our ever-nearing progression should be the necessary force behind our pursuit.

This paper aimed at demonstrating the ultimately inadequate approach of psychopharmacology in providing the best treatment for psychological disorders while focusing on schizophrenia, which many may argue, requires pharmaceutical intervention. The idea is not to undermine psychopharmacology as a pillar of knowledge that has and always will be an essential component in unlocking the mysteries of our mind about brain chemistry and functions, nor is it to forbid the

practice of medicine in psychiatry, therapy, or any related field. The purpose remains merely to recognize the shortcomings drugs have in the bigger picture.

It is a dire need never to disregard a practice that has unarguably provided a remedy for most of the last century without giving an alternative to ensure what would be lost. The area of neuroscience as described in this paper offers a more favorable means of treating clients with psychological disorders.

Although it proves monumental in psychiatry, the implications on therapy are less.

In fact, it could easily be argued that drugs have altered the holistic approach needed to reach clients [23]. Psychoeducation and family therapy of clients diagnosed with schizophrenia often focused on the side-effects of psychoactive drugs, stigmatization, and resources to receive medication. By diminishing the use of drugs, therapists will be better able to concentrate on the tried and true practices of humanistic counseling theories. For this reason, it has been central to recognize the importance of a healthy lifestyle [18].

Our advances in neuroscience do not assure trial without error, neurological treatment without dependencies, or intervention without contraindication. We have yet to demonstrate perfection in these areas. Although our goal will be to reach such state, even with the shift from pharmaceutical to neurological intervention, we must continue our pursuit [24-26].

It is true that diet, exercise, and meditation have not, and probably never will be, wholly proven sufficient to cure all illnesses, but the marrying of a healthy lifestyle and psychological treatment is entirely warranted. This treatment method should be an integral component of every therapeutic approach as well as any pharmacological or neurological intervention. Certainly, a healthy lifestyle for the body is as for the mind. Until we have proven any separation of the two, we can only assume this is a tautology in the highest regard.

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