



BioMoods - Overview

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Abstract

This paper outlines how “BioMoods”, when fully implemented, can assist those who are neurodiverse (bipolar, ADHD, autistic, etc.) in transforming their psychological health, thereby retaining the unique gifts of their conditions, while lessening the unpleasant side effects.

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Overview

BioMoods is a knowledge and support system designed to help the neurodiverse¹ (and ultimately all people) better manage inconvenient personal traits, thus enabling them to achieve their optimum potential as individuals. It is a fusion of modern data analytics, internet technology, and both old and new collected knowledge. BioMoods pulls together the experience and wisdom of millions of people and presents that information in a way that is tailored to each individual. Each user will encounter personalized healing strategies which include human biology (diet and exercise); varied forms of therapy and spiritual healing; medicines ranging from the pharmaceutical to the Ayurvedic; as well as the collective wisdom of thousands of mindfulness practitioners and recovered addicts.

¹ “Neurodiverse” is a term developed by the autistic community. It replaces the demeaning and misleading term “mentally ill.” This term has been adopted by people with conditions such as bipolar disorder, ADHD, and OCD. While often grateful for their gifts, many sometimes suffer from side effects like anxiety and depression.

Why this is now possible

Although it may sound ambitious, exponential growth in the areas of computing and self-awareness in recent years have given us access to vast resources. Even without computers, humans have long had a huge collective body of knowledge. When Google came into widespread use, it *did not actually create any new knowledge*; it just made what people already knew more accessible. Similarly, BioMoods will make a vast body of existing healing knowledge available in more useable ways. It will organize what people already know about healing and improving themselves and make it available in a way that's tailored to each individual.

If you're dealing with something like depression, you're probably aware that different things work for different people. A specific drug or therapy may help one person, and yet do nothing for someone else. Meditation helps many people, while for others it's incredibly uncomfortable. For those depressed due to magnesium-deficiency a Magnesium supplement can be a miracle pill, but for most people it does nothing. BioMoods is designed to cut through the uncertainty, and find personalized solutions effective for each individual.

It works in four stages

1) Your anonymous account collects selected metrics

BioMoods users create anonymous accounts and use these accounts to list what moods and symptoms they are interested in changing. This might include things like depression, anxiety, loneliness, obesity – almost anything you would like to change about yourself can be included in your BioMoods profile. Users can also list anything they do or experience that might affect moods and symptoms, such as diet, activities, and medications. BioMoods allows you to choose from hundreds of attributes, and you can also make up your own. With this information, BioMoods generates a personalized phone App or web interface for you. You use this to log both your symptoms and activities several times a day. (It's easier than posting a picture of your cappuccino on Facebook.) You can also collect data from devices such as Fitbits, blood pressure cuffs, sleep monitors, even "smart" scales.

It's important to note that BioMoods collects NO personally identifiable information such as names, addresses, and credit cards. We intend to make the database available to accredited researchers, but they will never get enough information to personally identify people.

2) You learn from your metrics

Once a modest amount of data has been collected, people can use the online tools to look at how their activities affect their symptoms. Initially the information will be available as tables and graphs enabling you to chart supplements, medications, and activities against your symptoms. You can ask questions like: "Does my medication really lower my anxiety? Does it work as well as fish oil, or magnesium, or Yoga? Do the effects last for weeks or years?"

BioMoods users will have a base of solid data about what has worked for them and what has not. No more trying to remember when you started or stopped taking a medication or shifted exercise patterns.

3) You learn from everyone's metrics

Once BioMoods has thousands of users, it will become possible for data analytics software to match people with similar profiles of symptoms and working solutions, and then cross-suggest the best solutions. This way a supplement or exercise suggested to a BioMoods user will be known to work for hundreds of very similar people. You can make wise decisions instead of hopeful guesses in trying new activities, drugs, supplements, or other solutions.

4) A unique database evolves which benefits everyone

Over time, BioMoods servers will collect a large but totally anonymous database of what solutions work for what kind of people. Researchers from diverse fields such as psychiatry, nutrition and medicine will be able to access data of a volume and detail that has never before been available. We hope this will facilitate the creation of a

new generation of human wellness.

Why we exist

BioMoods was motivated in part by the “Mindful Data” Meetup group in San Jose, a group of data scientists seeking a large database of psychological conditions and treatments available to accredited researchers. In our months of meeting and outreach, we have not, as of February 2020, discovered a single such database. Those that do exist are too small, usually privately owned by hospitals or insurance companies, and protected by HIPPA laws since they contain personal information. Bottom line: We had lots of creative research ideas, but no data to do the research.

The type of “Big Data” analytics that is routinely done on stock prices, consumer buying habits, and even freeway traffic patterns is simply not being done on the issues of those who are neurodiverse. The goal of BioMoods is to change that.