



## Mind-Sets for Prescription Weight Loss Products That Are Advertised Directly to Consumers: Using Mind Genomics Thinking with AI for Synthesis and Exploration

Howard R Moskowitz<sup>1\*</sup>, Stephen D Rappaport<sup>2</sup>, Sunaina Saharan<sup>3</sup>, Sharon Wingert<sup>4</sup>, Tonya Anderson<sup>4</sup>, Taylor Mulvey<sup>5</sup> and Martin Mulvey<sup>1</sup>

<sup>1</sup>Cognitive Behavioral Insights, LLC, USA

<sup>2</sup>Stephen D. Rappaport Consulting LLC, USA

<sup>3</sup>Government Medical College, India

<sup>4</sup>Tactical Data Group, USA

<sup>5</sup>St. Thomas More School, USA

\*Corresponding Author: Howard R Moskowitz, Cognitive Behavioral Insights, LLC, Albany, NY, USA.

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### Abstract

This paper deals with a simulation of mind-sets dealing with direct-to-consumer weight-loss drugs. The strategy is to present the AI (LLM, large language model) with a request to identify mind-sets of prospective consumers when they are presented with these weight loss drugs. The approach generates five different mind-sets, answering by simulation five questions about each mind-set. The study finishes with a further simulation of the "story" of three individuals, their thoughts when presented with these drugs, and why they decided either to use them or not to use them. The objective of the entire study is to demonstrate the teaching power of simulation for medically related issues. The approach can be extended across many different products, situations, and types of people. The approach is designed for an initial, custom-tailored introduction to a topic by those unfamiliar with the topic, but who have specific interests on which they want to focus.

**Keywords:** Artificial Intelligence Mind Genomics; Mind-Set; Prescription Drugs; Weight Loss

### Abbreviations

AI: Artificial Intelligence; ChatGPT: Chat Generative Pre-Trained Transformer; LLM: Large Language Model

### Introduction

In the past, weight-related health issues were often overlooked and stigmatized in society. There was a lack of understanding about the impact of excess weight on overall health, and diets filled with processed foods and sugary beverages were the norm. As a result, obesity rates soared, leading to a multitude of health problems such as heart disease, diabetes, and high blood pressure [1,2].

As studies about potential problems have progressed and well-being has become more important, people are becoming more aware of how important it is to stay at a healthy weight [3-5]. The growth of social media and easy access to information has also had a big effect on how people think about their health and weight. People are now more likely to look for healthy foods, work out regularly, and eat with more awareness [6,7].

Diet plans, pills, and tools that promise quick weight loss have made the diet business grow in the past few years. Some of these items may help for a short time, but the best way to lose weight and keep it off is to make long-term changes to how you live your life.

People are becoming pickier about which weight loss plans work and are safe. They are choosing methods that are backed by science, nutritionists, and doctors [8-10].

Additionally, body positivity and self-love have become common ideas that question traditional ideas of beauty and encourage acceptance of all body types and sizes [11,12]. People are now more likely to put their mental and emotional health ahead of their physical health because of this change in attitude. This has led to a more balanced approach to weight management.

As time goes on, it is important for people to stay up to date on the latest studies on health problems and trends linked to weight. People can make better decisions that are in line with their general health goals by learning more about health issues and getting help from health pros. In the end, getting to a healthy weight is a personal journey, and everyone will have a different road based on their own wants and tastes.

### **The importance of knowing the mind-set of the customer**

In today's world, understanding mind-sets has become increasingly important in the realm of doctor-patient relationships. As more research emerges about the impact of psychology on physical health, healthcare professionals are realizing the significance of addressing patients' beliefs, attitudes, and emotions. By recognizing and addressing mind-sets, doctors can better tailor treatment plans to each individual's needs, leading to more successful outcomes and improved patient satisfaction. Additionally, understanding mind-sets can help break down barriers in communication and build trust between doctors and patients, ultimately creating a more positive and collaborative health care experience [13,14].

Additionally, mind-sets are important not only in the doctor's office but also with drug businesses and their goods. Getting people to believe pharmaceutical businesses has become very important as more and more try to get a piece of the market. Drug businesses need to know how people think in order to effectively explain the safety, effectiveness, and benefits of their goods. Drug businesses can build confidence and trust in their names by answering what customers think and believe. This will eventually lead to more sales and market success [15].

In an era where misinformation and skepticism about the pharmaceutical industry abound, understanding mind-sets is essential for maintaining transparency and accountability. By listening to consumer concerns and addressing their needs, drug companies can foster a sense of trust and credibility in their products. People may be more loyal to brands that they trust, and the public may have a better opinion of the pharmaceutical business as a whole.

To sum up, it is hard to overestimate how important it is to understand mind-sets when it comes to doctor-patient ties and trust in drug companies and their goods. Health care workers and medicine companies can make better treatment plans, build trust and confidence, and improve total patient results by understanding and responding to the views, attitudes, and feelings of both patients and customers. Understanding mind-sets will definitely be very important in shaping the future of patient care and drug marketing as we continue to work our way through the complicated healthcare business [16].

### **How artificial intelligence can help us by synthesizing mind-sets based upon the data that's out there**

Artificial Intelligence (AI), specifically large language models (LLMs), have revolutionized the way we understand and analyze human behavior. By synthesizing various mind-sets that may exist within society, LLMs have the ability to provide insights into consumer wants and needs, desires, and fears. Through advanced algorithms and vast amounts of data processing, these AI systems can predict trends and patterns in consumer behavior, allowing businesses to tailor their products and services more effectively [17-20].

One way in which LLMs help us synthesize mind-sets is through their ability to analyze vast amounts of text data, such as social media posts, online reviews, and customer surveys. By examining these sources, AI can identify common themes and sentiments among consumers, helping businesses understand what drives their target audience. This information can then be used to create marketing campaigns that resonate with customers on a more personal level.

LLMs can also model different situations and guess what might happen based on data that is already available. AI can guess how

certain goods or services might do in the future by looking at how people have used them in the past and how the market has been moving. Businesses can learn a lot from this kind of predictive modeling about which goods are likely to do well and which ones might need to be changed or taken off the market.

LLMs can do more than just guess what people will do; they can also help businesses spot new trends and change their plans to fit them. AI can let businesses know about changes in customer tastes or the way the market works by looking at data in real time. This helps them stay ahead of the curve and stay competitive in their fields.

Overall, the synthesis of mind-sets through AI opens up a world of possibilities for businesses looking to better understand their customers. By leveraging the power of LLMs to analyze and interpret vast amounts of data, businesses can gain valuable insights into consumer wants and needs, desires, and fears, ultimately leading to more effective marketing strategies and product development.

### Synthesizing different mind-sets for people exposed to direct to the consumer prescription weight loss drugs

The remainder of this paper is given over to synthesizing mind-sets in terms of responses to direct-to-consumer advertising of weight-loss drugs as well as synthesis of individual stories. The objective is to demonstrate how mind genomics thinking telling us about mind-sets coupled with artificial intelligence, can synthesize and produce meaningful insights into an emerging field. The information presented here is not experimental, but synthetic, based upon artificial intelligence and is not to be considered as representative of empirical information. Rather, it is a demonstration of what can be learned early on by letting the power of mind genomics and artificial intelligence synthesize different scenarios and from that, teach us.

Table 1 shows the prompt given to the AI to synthesize the mind-set. Note that in Table 1 there is nothing specified about these mind-sets. There are only the questions to be asked of each mind-set. It will be the “job” of the LLM (ChatGPT 3.5) to develop the mind-set, and afterwards answer the questions.

Today’s medical patient is confronted by direct-to-patient advertising for many drugs, especially those dealing with weight loss. Science has shown that there are different mind-sets, that is ways of thinking about topic, ways of assigning importance to the aspects of the topic. The topic is weight loss drugs, directly advertised to consumers but requiring a doctor’s prescription.

We know there are mind-sets. Please answer all the questions below for each mind-set.

1. Why is the mind-set interested in the drug?
2. What are the messages which convince the mind-set, and make it trust the drug and the drug company? Give the answer in terms of two slogans which convince the mind-set to trust. And then discuss in detail why these are convincing messages.
3. What are the messages which the mind-set rejects? Give two slogans to represent these messages. And then explain why these are turn-offs.
4. What do you predict to be the weight loss success or failure of this mind-set, and why?
5. How does this mind-set talk about these drugs, if it does? To whom? Why?

**Table 1:** The prompt given to the LLM, embedded in the Mind Genomics platform, BimiLeap.com.

Table 2 shows the mind-sets synthesized by AI, along with the requested answers for each mind-set. For the sake of brevity, the paper presents only five mind-sets. The bottom of the table shows the names, but not other information, for other mind-sets suggest by AI.

### In their own words

We finish with the construction of three stories. The objective here is to bring the synthesis to life so that a reader can get a sense of what might go through the mind of a person exposed to these types of weight loss drugs. There are many different ways of formulating these stories. One just simply instructs the LLM, the artificial intelligence, to construct a story for a certain type of person, such as male, life situation, and so forth. The LLM, the artificial intelligence, does the entire rest of the work. The benefit of such an approach is that within five to ten stories, one quickly gets an idea of

**Mind-Set 1: QUICK FIX SEEKER**

1. The mind-set is interested in the drug because they are looking for a fast and easy solution to their weight loss struggles.
2. Slogans to convince the Quick Fix Seeker: "Lose weight effortlessly with our miracle pill!" and "Join the thousands of satisfied customers who have achieved their ideal weight with our product." These messages appeal to the mind-set's desire for quick results and promise an easy solution to their problems.
3. Slogans representing rejected messages: "Results may vary" and "Consult your doctor before taking this medication." These messages may be seen as potential barriers to achieving quick weight loss and may be perceived as slowing down the process.
4. Predicted weight loss success or failure: The Quick Fix Seeker may experience initial weight loss success with the drug, but long-term success is unlikely as they may not be willing to put in the necessary effort to maintain their weight loss or address underlying health issues.
5. The Quick Fix Seeker may talk about these drugs as a magic solution to their weight loss struggles, promoting them to friends and family as a quick fix without mentioning potential risks or side effects.

**Mind-Set 2: HEALTH-CONSCIOUS CONSUMER**

1. The mind-set is interested in the drug because they are seeking a safe and effective solution to support their overall health and well-being.
2. Slogans to convince the Health-Conscious Consumer: "Our product is backed by scientific research and proven results" and "Take control of your health with our doctor-recommended weight loss medication." These messages appeal to the mind-set's focus on evidence-based practices and trust in medical professionals.
3. Slogans representing rejected messages: "Lose weight fast!" and "No diet or exercise required." These messages may be seen as unrealistic and potentially harmful to the mind-set's beliefs in the importance of sustainable and healthy weight loss practices.
4. Predicted weight loss success or failure: The Health-Conscious Consumer may experience moderate weight loss success with the drug, especially when combined with lifestyle changes, but may be cautious of relying solely on medication for long-term results.
5. The Health-Conscious Consumer may discuss these drugs with their healthcare provider and other like-minded individuals, focusing on the importance of evidence-based practices and holistic approaches to weight management.

**Mind-Set 3: SKINNY-BUT-NOT-SATISFIED MIND-SET**

1. This mind-set is interested in the drug because they want a quick fix to achieve their desired body image.
2. Slogans that convince the mind-set: "Lose weight without giving up your favorite foods!" and "Get the body you've always wanted in just weeks!" These messages are convincing because they appeal to the desire for immediate results and minimal effort.
3. Messages that the mind-set rejects: "Healthy eating and exercise are the best ways to achieve sustainable weight loss" and "Consult your doctor before starting any weight loss medication." These messages are turn-offs because they go against the idea of a quick fix without sacrifice.
4. The weight loss success of this mind-set is likely to be short-term and unsustainable. They may experience initial weight loss with the medication, but without lifestyle changes, they are likely to regain the weight.
5. This mind-set may talk about the drugs in a positive light to friends and on social media, boasting about their rapid weight loss results. They may also dismiss any concerns about potential side effects or long-term health risks.

**Mind-Set 4: THE BODY-IMAGE OBSESSED MIND-SET**

1. The mind-set is interested in the drug because they are overly focused on achieving a specific body image or weight goal.
2. Messages that convince the mind-set and make them trust the drug and the drug company could include slogans such as "Get your dream body in just weeks!" and "Say goodbye to cellulite forever!" These messages are convincing because they promise quick and dramatic results that align with the mind-set's obsession with their appearance.
3. Messages that the mind-set rejects could be slogans like "Healthy habits lead to long-term weight loss" and "Consult with your doctor before starting any weight loss program." These messages may be seen as turn-offs because they emphasize the importance of lifestyle changes and medical supervision, which the mind-set may view as unnecessary obstacles to achieving their ideal body.
4. The weight loss success of this mind-set may be limited as their obsession with a specific body image may lead to unsustainable or unhealthy weight loss methods. Without a focus on long-term health and well-being, the mind-set may struggle to maintain their weight loss results.
5. The mind-set may talk about these drugs as magical solutions that will finally help them achieve their dream body. They may discuss their experiences with friends or on social media, seeking validation and encouragement for their weight loss efforts.

**Mind-Set 5: THE RATIONAL CONSUMER MIND-SET**

1. This mind-set is interested in the drug because it seeks evidence-based solutions and wants to make informed decisions about their health.
2. Messages that convince the mind-set could be "Backed by clinical studies to prove effectiveness" and "Preferred by healthcare professionals for safe weight loss." These messages are convincing because they appeal to the rational mind-set's desire for evidence and trust in medical professionals.
3. Messages that the mind-set rejects could be slogans like "Miracle weight loss solution guaranteed to work overnight" and "No need for diet or exercise, just take this pill." These messages are rejected because they sound too good to be true and go against the rational mind-set's understanding of realistic weight loss.
4. The Rational Consumer Mind-Set is likely to have moderate success with weight loss drugs, as they will approach them with a critical eye and realistic expectations based on evidence and expert opinions.
5. This mind-set may discuss weight loss drugs with their healthcare provider or a trusted medical professional, focusing on the science behind the drugs and asking about potential side effects or interactions with other medications. They will prioritize their health and well-being in these discussions.

Other possible mind-sets suggested by AI include:

- The Evidence-Based Mind-Set
- The Analytical Mind-Set
- The Informed Consumer Mind-Set
- The Safety-Conscious Mind-Set
- The Research-Oriented Mind-Set
- The Rational Decision-Making Mind-Set
- The Balanced Approach Mind-Set
- The Medical Professional Endorsed Mind-Set
- The Science-Minded Mind-Set

**Table 2:** Five "synthesized" mind-sets, emerging from the Idea Coach AI embedded in the Mind Genomics platform, BimiLeap.com.

how people think in a way which is interesting to the average reader. Table 3 shows a sample of three of many stories constructed to present the experience of a “typical” albeit synthesized prospect for the weight loss drug.

**EMMA'S STORY**

As Emma scrolled through her social media feed, she couldn't help but notice the countless ads promoting a new weight loss drug that promised quick results without the need for exercise or dieting. Intrigued by the before and after photos and glowing testimonials, she found herself fantasizing about the possibility of finally achieving her goal weight.

After some internal debate, Emma decided to schedule an appointment with her doctor to inquire about the prescription weight loss drug. As she sat in the waiting room, she felt a mix of excitement and anxiety, unsure of what the doctor would recommend.

During the consultation, the doctor explained the potential side effects and risks associated with the drug, causing Emma to second guess her decision. Ultimately, she left the office without a prescription, feeling grateful for the doctor's honesty and guidance.

Reflecting on the experience, Emma later admitted, “I was so tempted by the idea of a quick fix, but I know now that true health and wellness require more than just a pill.” She resolved to focus on making gradual lifestyle changes and taking a more holistic approach to weight loss.

**JANE'S STORY**

As she scrolled through her social media feed, Jane, a 55-year-old woman couldn't help but be intrigued by the flashy advertisements promising quick weight loss with a prescription drug. Thoughts of her escalating weight gain since her divorce and fears of developing diabetes loomed large in her mind.

Feeling a mix of desperation and hope, she made an appointment with her doctor to inquire about the weight loss drug. The doctor cautiously explained the potential side effects and advised her on making lifestyle changes as well. Despite the warnings, something in her felt drawn to taking the plunge and giving the drug a try.

After starting the medication, she noticed the pounds melting away and her confidence returning. She felt a renewed sense of energy and vitality, thankful for the solution that seemed almost too good to be true. Reflecting on her journey, she shared, “I was hesitant at first, but I'm glad I took that chance. It really turned my life around.”

**MICHAEL'S STORY**

As Michael, a 50-year-old man, sat in front of the TV watching ads for prescription weight loss drugs, he couldn't help but feel both intrigued and skeptical. The promise of quick and easy weight loss was tempting, but he wondered about the potential side effects and long-term consequences of such medications.

One day, after seeing the ad multiple times, he finally mustered up the courage to ask his doctor about the prescription weight loss drug. The doctor explained the risks and benefits, but ultimately advised against it due to Michael's medical history. Disappointed but relieved, Michael decided to focus on healthy eating and exercise instead.

As the advertising for the weight loss drug continued to bombard him, Michael started to feel a sense of guilt for not taking the easy route. However, he reminded himself of his doctor's advice and stayed committed to his current lifestyle choices. Reflecting on the experience, Michael shared, “I realized that quick fixes are not always the best solution for long-term health.”

**Table 3:** In their own words — three synthesized “stories” of individuals considering the use of the weight loss drugs.

## Discussion and Conclusions

Direct-to-consumer advertising for prescription weight loss drugs has been on the rise in recent years, as pharmaceutical companies aim to reach a wider audience and increase their sales. These ads often feature before-and-after pictures, testimonials, and catchy slogans to appeal to consumers who may be struggling with weight loss issues. It is important to understand the mind-set of individuals who are being targeted by these ads, as they may be vulnerable and looking for a quick fix to their weight problems. By understanding their motivations and desires, healthcare professionals can provide better guidance and support to help them achieve long-term, sustainable weight loss.

Knowing the mind-set of individuals who are considering prescription weight loss drugs is crucial because it allows healthcare providers to have open and honest conversations with their patients about the risks and benefits of such medications. Many consumers may be unaware of the potential side effects and contraindications of these drugs and may be swayed by the promises of rapid weight loss without considering the potential consequences. By understanding their mind-set, healthcare providers can better educate and inform their patients about the various options available to them and help them make informed decisions about their health and well-being.

Direct-to-consumer ads for prescription weight loss drugs are likely to keep growing because more and more drug companies see that this market has the ability to make them money. As worries grow about how these ads might change people's health and behavior, there may also be more rules and closer examination of these ads. People may feel confused by the constant stream of ads for weight loss drugs and find it hard to tell fact from fiction when it comes to how well they work and whether they are safe.

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